

The American Bee Journal

DEVOTED EXCLUSIVELY TO BEE CULTURE.

VOL. XIII.

CHICAGO, ILLINOIS, MARCH, 1877.

No. 3.

Editor's Table.

Monroe Co., N. Y., Feb. 10, 1877.—“Do bees get honey from our common red clover? If not, do they hover around clover fields unaware of the fact?” J. V.

[The Italians do get honey from our common red clover. The black bees essay to do so very rarely, if ever—Ed.]

“Which is the best honey-producing plant?” J. G.

[I know of nothing surer or better than mellilot clover. It does not bloom the first year, and lasts but one season, but it will re-sow itself; if sowed thickly, it kills other weeds. Ten acres of mellilot would give work for one hundred colonies. The crop would be permanent, if sowed two years in succession on the same spot. To get it blooming in September, it should be cut about the last of June or a little before. Then it would start new shoots and be covered with flowers from the last of Aug. till frost.—CH. DADANT.]

Tipton Co., Tenn., Jan. 16, 1877.—“I have 9 colonies of blacks in box-hives. I intend to get Langstroth hives in the spring, and transfer my bees to them. On May 10, I had a fine swarm come out. I hived them, and they worked finely for 4 days, making several pieces of nice comb and filled it with honey. On the 5th day they were again on the wing. I put them into the same hive again, it being a new one, but they came out again. I hived them a third time, but they would not stay, so I concluded to let them go. They settled on a small pear tree in front of the hive. I paid no attention to them, and they then settled on the bottom of the hive, remaining there till night. I then carried them back to the mother hive, and brushed them off. They soon entered it, and have done well ever since. What was the cause of the repeated swarming? When is the best time to transfer, in this county? The moth fly and red ant are very troublesome here. How can I get rid of them? Please answer in the A. B. J.” D. E. HAYNIE.

[I have had one case very similar to yours. I could never account for my own, so will not try to in your case. In my case there was brood in all stages, and yet they would leave.

The best time to transfer is in the middle of warm days, during the first gathering of honey in spring. The combs are then light, and if the bees are busy storing, they will not trouble.

To protect against the moth, keep your colonies strong, and never allow surplus combs to hang where moths can get at them.

To destroy ants, mix Paris Green with syrup, and place in the top of hive, where the ants can reach it, but where the bees cannot.—A. J. COOK.]

1. Please give in the JOURNAL your best advice on the introduction of queens, immediately after the old queen is removed.

2. How should weak colonies be united, so they will harmonize?

3. What is the best way to feed light colonies? E. P.

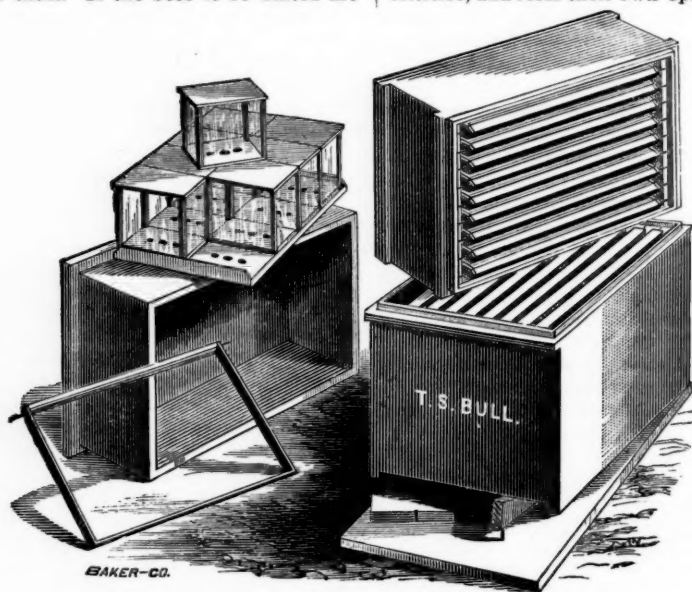
[1. With more than 200 imported queens introduced in our apiary last year, we lost only 5 by introducing. As this percentage is small, we have full confidence in our plan, which is to remove the old queen; to put the queen to be introduced, caged in a sheath of coarse wire-cloth, between two brood combs at one end of the cage, a little above the frames, to give greater facility in removing the cork. Then wait 48 hours before removing the cork. Open the cage quickly, but carefully, not to arouse the anger of the bees, and to avoid robbers entering the hive. To find if the queen is alive, without removing the cage, we remove the stopper and put in its place a stopper made of a small piece of honey comb, adjusted loosely in the cage. Then bring down the cotton quilt, which we use in place of honey-board, and shut up the hive. The cage can be removed the next day. In seven days we see if the queen has been accepted. If there are eggs, the queen is safe, if there are none and there are queen cells, the queen has been killed. All the queens we received last year from April to August, were introduced safely. The 5 killed were received during Aug. and Sept. In the fall months bees are more difficult to handle, especially if honey is scarce.

2. To unite colonies, kill the oldest or poorest queens; cage the queen that you

want to preserve and put her between the combs, as when introducing. This is indispensable to prevent her from being killed and also to insure success. When the bees of two colonies are mixed, both queens are attacked by the strange bees, who gather around them in compact balls, in which they can be stung, smothered or maimed; sometimes both queens are killed. Then, after sundown, bring the hive to be united near the hive containing the queen; open the hives and put the frames of the hive to be united beside those of the hive containing the queen. If the frames were loosened beforehand, you can take two or three frames at once, by putting your fingers between them. If the bees to be united are

in front, are to contract the entrance at will; the frames in the brood chamber are 15x10 inches inside; those in the super, 15x 5½; nails are driven into each end of frame (see frame to the left), which fit into notches; the honey-board has three holes corresponding to three in each honey box; pieces being nailed at each end of the honey-board to keep the boxes in place. The honey boxes are 4x6 in., 5 in. high; the tops of the frames in super are ¾ in. square, but turned so as to give one sharp edge up, instead of the flat side, and the other down for the comb to be attached to.

Mr. Bull calls it the "Ne Plus Ultra." It is not patented. Now all our readers can criticise, and form their own opinion of it,



T. S. BULL'S "NE PLUS ULTRA" BEE HIVE.

of a different race, it may be advisable to sprinkle some sweetened water in the hive as soon as the uniting is performed. To prevent bees from returning to the old place, put a slanting board in front of the hive, as an obstacle to bees emerging from the entrance. Seeing something strange, they look around the hive and remark that their location is changed.

3. Feed sugar candy. It is better than honey or syrup.—CH. DADANT.]

Franklin Co., Mass., Feb. 1, 1877.—"Will you please describe, in the A. B. J., Mr. T. S. Bull's hive, that you say is in your office."
JAS. P. HOWARD.

[The cut will give a good idea of it. The bottom board is hinged on behind, to facilitate its being cleansed; the two little blocks

and bee-keepers usually differ in opinion as often as anybody.—Ed.]

Boone Co., N. Y., Jan. 26th, 1877.—"Bees doing well, with the exception of one hive which has dysentery. The bees crawl out in front of the hive and discharge their fœces; they are very uneasy. What is the best to do with them?" J. F. PELHAM.

[You can do nothing more than to hope for weather suitable for them to fly out, unless you take them into a warm room, place them in a large box covered with mosquito netting, in which case they will void their fœces and be all right. I have tried this with perfect success. The hive for convenience should be placed in the box before the room is heated. When quiet return them to the stand.—A. J. COOK.]

☞ Moon's *Bee World* has been incorporated with the *Bee-Keepers' Magazine*, of New York, Mr. Moon acting as corresponding editor. The *Magazine* announces that those who have paid for both papers will have their time extended on the *Magazine* to cover the amount due on the *World*. On account of failing health, Mr. Moon offered us the *World* last fall, but we declined—for if the A. B. J. "possessed the whole *World*," it might lose its own self, you know! Here is our ☞ friend King; "Success to you."

MORE PREMIUMS.—Friend Murphy sends the following: "I offer a No. 1 Extractor (the wood part of black walnut) for the one sending the largest number of subscribers to THE AMERICAN BEE JOURNAL between March 1st and Dec. 31, 1877. The publisher to be the judge."

Friend Hardin Haines offers an Italian queen to the one sending the largest number of subscribers to the A. B. J., between March 1 and August 1, 1877.

These are all in addition to our premiums. It will pay well to spend a few hours canvassing for the A. B. J.

☞ Circumstances having transpired that will indefinitely prolong friend Clarke's stay in Canada, we shall not have the pleasure of his company, or be able to carry out our original plans in connection therewith. Such is life!

☞ A friend sends us a clipping from the *St. Nicholas* (now going the rounds of the papers), stating that bees go 40 miles for clover. That story was probably written by "Old Nick," for the next edition of "Extravaganza Americana!"

☞ We are now getting up a beautifully Illustrated Catalogue of everything used in the apiary, with Prices Current, and much other information, which we will send FREE to all who desire them. As we wish to get one into the hands of every bee-keeper in the United States and Canada, we will supply them FREE in any quantity to those who will kindly distribute them.

Dr. J. P. H. Brown offers as a premium to the person sending the greatest number of subscribers to THE AMERICAN BEE JOURNAL, between now and the first of July, a tested queen of imported mother. The queen to be sent upon presentation of certificate from the publisher, certifying to the number of subscribers sent.

Secure a Choice Queen.

We now renew our offer to send a choice tested Italian queen as a premium to any one will send us four subscribers to THE AMERICAN BEE JOURNAL with \$8.00. This premium, giving a good queen for four subscribers, will pay any one for taking some trouble to extend the circulation of the JOURNAL. Premium queens will in every case be warranted.

Centennial Award.

The following letter from England will explain itself:

London, England, Feb. 2nd, 1877.—Many were surprised at the small collection of apian apparatus at the Centennial. Our display consisted of bar-frame hives of different descriptions, our improved cottage hive with bell glasses, the divisional super, zinc adapters with perforations to admit workers, but small enough to exclude the queen or drones; stereotype plates for making impressed wax sheets, Cheshire's apparatus for making wax guides, the observatory Unicomb hive with Venetian blinds, honey extractor, bee feeders of various kinds, comprising bottle feeder, new, round wood feeder, zinc feeder, etc.; fumigators, honey glasses, bee veils, india-rubber gloves, and all appliances for the apiary. We have just received through the British Commission a certificate of award with reasons for giving same, as follows:

REPORT OF AWARDS, Philadelphia, }
Dec. 12, 1876. }

For a large and varied collection of economical hives, so arranged that the honey can be taken without the destruction of the bees. Special attention is directed to the Unicomb hive with Venetian blinds to allow the bees to be exposed to light whilst the sun's rays are excluded. Also for a honey extractor by centrifugal force which removes the honey from the combs without injuring the latter, which can be returned to the hives.

JOHN COLEMAN,
On behalf of the Judges; and approved by
"Group of Judges," with five signatures attached.

I shall preserve it as a memento of the great Centennial Exhibition of 1876.

ALFRED NEIGHBOUR.

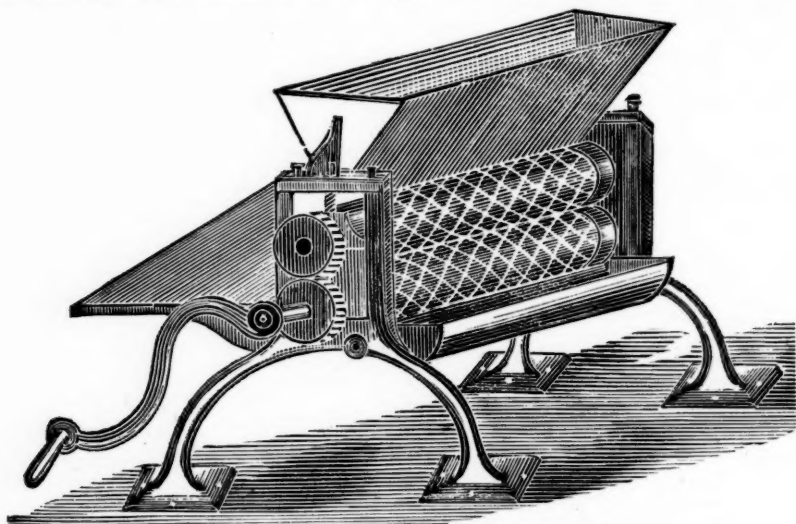
☞ Having devised a new and valuable implement in the management of bees, which I will sell as cheaply as it can be afforded, if well made, I ask bee-keepers: If said implement proves a valuable help in their hands and a benefit to the bee-keepers of the world, to give the inventor the *credit* of said invention, and, last but not least, their orders, as a reasonable reward of well doing.

T. F. BINGHAM.

☞ We can supply Comb Foundation, or machines to make it, early tested Queens or Colonies, all kinds of Smokers, Hives or Extractors, Seeds or anything wanted by bee-keepers at the lowest prices.

☛ The Michigan Bee-Keepers' Association will hold their next meeting in the Supreme Court Room, Lansing, on Wednesday, March 14. An interesting programme has been arranged and there will be an exhibition of honey and implements for the apiary. A cordial invitation is extended, and the hotels have given reduced rates.

☛ Many thanks to those who have kindly volunteered to put up our colored posters in their localities. We have sent a few to those that we felt sure would get them put up, but had not sent for them, and shall send more as circumstances will permit. Friends getting them put up in public places will much oblige the publisher.



KING'S COMB-FOUNDATION MACHINE.

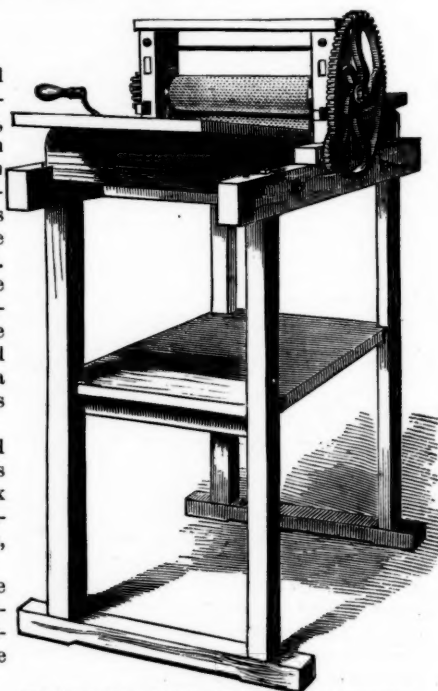
Comb Foundation Machines.

In answer to several inquiries we will here give cuts of the comb foundation machines gotten up by friends Root and King, believing that the reader will obtain from them a much more correct idea, than from reading a description merely. Both machines are creditable to their inventors, as very ingenious contrivances to make the "foundation" of cells for the use of the bees.

The Root machine is similar to the one used by Mr. Perrine, of this city, who purchased it of Mr. Root. The King machine is similar to the Weiss machine, also used by Mr. Perrine. So that these cuts give a tolerably correct idea of *all* the machines now in use.

The rolls are made of type metal and have the shape of the bottoms of the cells cut in each, so that when a sheet of wax passes between them, it receives indentations that form the "foundation" of cells, afterward worked into comb by the bees.

A close study of the cuts will give the reader a tolerably correct idea of the manner of working each machine. Both are advertised for sale in this issue, as well as the artificial comb foundation itself.



ROOT'S COMB-FOUNDATION MACHINE.

Correspondence.

For the American Bee Journal. Introducing Queens.

Your correspondents (Dadant and Nellis) seem to have some controversy with regard to the best plan for introducing queens. I consider the plan of one just as good as the other, but in my opinion neither of them are worth knowing, as it takes too much time to introduce a queen in either case. There is no necessity of being over 10 minutes in introducing any queen after the hive has been made queenless, and it should not require over 20 minutes to "unqueen and requeen" any stock of bees. As a general thing, a queen can be "drummed" out in 5 or 10 minutes, but a hive that has an old queen will bother much longer sometimes.

No colony should be allowed to go queenless for even one day, for the sake of introducing another queen, when it can be done in 15 or 20 minutes with perfect safety. I would rather "drum" a queen out of any kind of a hive, if the colony is strong, than to open it and search the combs over. I can usually "drum" one out in half the time that it takes to remove the combs. In a Langstroth hive I remove the honey-board and force the bees up into the cap, and if the weather is warm, I turn them down in front of the hive and let them run in. I will not give my method of introducing here, as I think most of your readers, who have read the JOURNAL the past few years, know how it is done. My plan is successful 99 times out of 100.

While I am criticising to some extent, I would like to say a few words more. Mr. Wm. H. Kirk gives his plan for wintering his bees, and has been successful, and considers "wintering and springing very simple—long-winded orations, to the contrary notwithstanding!" Let those who write essays on wintering take the above hint. By the time one gets through reading one of those long "orations," he does not know where to find himself.

Directions for wintering bees should not occupy over one column in the A. B. J. Mr. K. meant business when he threw out that hint. I will wind off before this gets to be one of those long orations. H. ALLEY.

Wenham, Mass.

For the American Bee Journal.

Ventilation.

In answer to a request, I will tell you what I know about ventilation. I use mostly Langstroth hives, and prefer the double portico: frame $17\frac{1}{2}$ in. long by 9 in. deep. When I have a swarm I ventilate according to the weather and size of swarm. If the weather is very warm and the swarm large, I may ventilate at both back and front entrances, which are each $\frac{3}{4} \times 15$ in. Sometimes I have two or more swarms together, and place on the surplus boxes at once, which gives additional ventilation, for the honey-board and boxes are not air tight. When two or more are hived together and you fear them leaving, cover the entrances with wire screens—a frame the size of the

portico with wire-cloth tacked on—and immediately place in cellar and darken for 1 or 2 days; don't leave in the hot sun, as I did one, for they will suffocate. For one swarm one entrance may be sufficient. The hive from which the swarm came may need a part of the entrance closed, especially if the weather should turn cool.

For spring and fall I close all back entrances and all of the front except 1 inch. When I place in the cellar for winter, I leave front entrance 1 in. open, and a little ventilation at top of hive for dampness to pass off, by raising honey-board or leaving some of the holes in it open. I have tried all grades of ventilation in cellar for wintering, but with little difference; only leave some open place at top. Where many are stored in a repository, they need some ventilation from without, and this needs to be regulated according to weather. I had a glass hive made 14 in. in diameter and 18 in. high, the top was dome-shaped, there being no open space except whole size of bottom, which I sat on a cheese-cover. I tried to have 3 different swarms, one of which was quite small, but they would all rush out for air. I put combs in it, but it was of no use.

New Boston, Ill.

D. D. PALMER.

For the American Bee Journal.

Thoughts on Insurance and the National Association.

MR. EDITOR:—We are having a cold, dry winter in Southern Kentucky. The morning of Jan. 8th, the mercury stood 28 deg. below zero. I fear we shall have great loss of bees, as but few are protected; they have unhealthy food, for the greater part of the stores were gathered from honey-dew, and not capped over.

By the JOURNAL, I learn that President Andrews recommends bee-keepers to form county associations for the promotion of bee-culture. This is certainly a good idea, and if carried out, would be the means of disseminating a correct knowledge of bee-culture. We have a society here that has done much good; a great many bee owners, who knew nothing of the recent discoveries have become bee-keepers since the knowledge they obtained at the meetings of our society.

The beneficiary society, or mutual life insurance, that Pres. Andrews speaks of, is a move in the right direction, for if you want to make a man useful and successful in any business you must place a reward before him. Many who are engaged in bee-culture would be encouraged to prosecute it with more industry and hope, if they were assured that those depending on them would have a support when they are called from labor to refreshment. Here in Kentucky we have the Masonic Life Insurance Co., organized in 1868, with a president (who is also treasurer) with a salary of \$1,000 per annum; a secretary with a salary of \$1,500; a state agent, who gets 25 per cent on amount of policies taken; with sub-agents in every Congressional District in the State; and 14 directors who get no salary. The first 3 years the officers got no pay, as the company was not able to pay them, but it has now 3,900 members, and each member pays to the local agent and he to the society \$1.10, when notified of the death of a member. The local agent gets

the 10 cents, and the dollar goes to the widow or legal heirs of the deceased member. The company now have from \$5 to \$20 for policy, owing to the age of the applicants. Members are admitted from 21 to 60 years of age. All applicants for membership are examined by a physician; his charges are \$2. The Co. now have \$20,000 capital out on interest. It takes money to run a rightly-conducted life insurance company that will pay those who become members of it. I would suggest if the company is organized for the benefit of bee-keepers, that the policy fee be not less than \$2.00 to start with, and as the company grows in numbers, the fee could be increased. I would also suggest that the officers of the company be in one locality, so that they could hold their meetings and conduct the business of the company with less trouble and expense than if scattered over a large territory. The amount to be paid by each on the death of a member, \$1.10.

I hope that these statements may be of some service in furthering the cause of bee-culture, and the organization of a bee-keepers' life insurance association.

N. P. ALLEN.

Smith's Grove, Ky., Jan. 10, 1877.

For the American Bee Journal.

A Question for our Microscopical Friends.

Did you ever notice the beautiful, little mechanical contrivance in the first joint of the anterior leg of the worker bee? Perhaps also in that of the queen and drone—we have none at this season to examine. If you will place the leg in the microscope and look carefully, you will see on the inner side of the joint a circular opening having a lid or tongue projecting from the upper side, and shaped on the other so as to nicely fit the other side of the opening. For what is it used? Will Messrs. Kellogg, Parker, or some others who have studied the habits of the bee and used the microscope, tell us? It looks like a nice place to hold the ugly worms when the little fellows want to carry them off; let his worship wriggle ever so much, our little Italian would have him fast, and could without trouble deposit him at a safe distance.

Medina, O., Feb. 1, 1877. M.

The Maury County B. K. Society

Held their quarterly meeting on Jan. 6th, 1877. Present:—W. S. Rainey, president; C. C. Vaughan, vice-president; Wm. J. Andrews, secretary and treasurer; E. C. Overton, D. Staples, J. C. McGaw, T. J. Perry, L. A. Boyd, A. Barr, D. J. Estes, J. W. Bates, F. A. Burke, J. A. S. Scribner, and several others.

The minutes of the last meeting were read and approved.

On motion the president was granted until next meeting to prepare his address.

Secretary Andrews made a verbal report of his attendance at the National Bee-Keepers' Society, held at Philadelphia.

The secretary read essays from Chas. H. Muth, Cincinnati, and Prof. Cook, of Lansing, Mich., which were ordered published, and a vote of thanks was tendered to Messrs. Cook and Muth for them.

A running discussion was then entered into on the yield per hive, uniting, and the severity of our winter.

Mr. D. Staples gave a detailed statement of how Mr. J. S. Hill, of Mount Healthy, O., managed his apiary.

On motion, A. Barr, L. A. Boyd and J. R. Lamb were elected honorary members.

Adjourned to the first Saturday in April.

WM. J. ANDREWS, Sec. and Treas.

Does Bee-Culture Pay?

READ BEFORE THE MISSOURI B. K. ASSOCIATION, JAN. 6, 1877.

This question has been often raised in the bee papers, and answered in the negative with divers additional slurs. Attempting to answer the question, one feels involuntarily prompted to ask another as, viz.:—Does farming pay? or, Does any other business pay?

In every avocation, no matter what, we find but a few who make it pay; a large number make a living at it or a little more, but many find it unprofitable. A reason for this may be a lack of adaptation, or the pressure of circumstances beyond their control.

Stimulated by extraordinary good luck for a year or two, a few sanguine persons have embarked in the "bee business," expecting to make a fortune in a hurry. They were disappointed. To all such I would say: "Sudden jumps in business are dangerous." He does a good business and a healthy one who is of slow but steady growth. It requires a good many years to get things handy in an apiary, not only to acquire a quantity of surplus combs in proper shape, besides a good many little things belonging to an apiary, but also to acquire the knowledge of making the proper use of the stock on hand. We are too apt to over-estimate our ability, in proof of which many invent patent hives, whose experience does not exceed a year or two.

In my estimation it matters but little what shape our hives are, if they are frame hives, and have Langstroth's arrangement, viz: that $\frac{1}{4}$ in. space all round the frames, and have open, top-bar frames. Another requisite to a well regulated apiary, I consider a location perfectly protected from cold winds. A deviation from this rule is generally the principal cause of our spring dwindling—at least as far as it has come under my observation. My bees have no dysentery since my adoption of the straw mat, and I venture the assertion that this malady, perhaps, would be unknown if all our hives had the proper upward ventilation. Pure air in the hive is just as essential as it is in our habitations. My apiary, located on top of a two-story house, gives me ample opportunity to observe the destruction of my bees by the cold winds of our spring, blown down while attempting to enter their hives on their home stretch. I have had no chance yet to remedy this evil; its time will come, however.

All the requisites for a successful outdoor wintering are:—strong stands with plenty of stores, proper upward ventilation, and in a locality shielded from wind.

All should be prepared to raise both comb and machine honey, as the one is often the means of selling the other. Be particular

out of what quality you raise the one or the other. For instance, in this part of the country, where white clover honey gives universal satisfaction for table use, I should not hesitate to run most of mine into machine-extracted honey. Had I, in addition to the above, a basswood or other light honey crop, I should turn all of it into comb honey. Comb honey is a fancy article only, consequently its appearance is of the same importance as its taste, to insure a ready sale. There are exceptions. I sold, this winter, several large lots of buckwheat honey very readily. They were in neat frames, the honey well capped and of good taste. Unfinished combs should not be sent to a dealer; they should be extracted, and they will be a valuable acquisition for another season. All comb honey should be put up in frames, not only because it finds a better sale, but also because all unfinished combs can be extracted, and nothing be lost.

If the side bars of the honey frames are $\frac{1}{4}$ in. wider than the top and bottom bars, so that the sides extend $\frac{1}{8}$ in. and allow the bees $\frac{1}{4}$ in. space between the frames, they ship, in sectional boxes, with comparative safety. Care should be taken to provide each frame with a true "starter" to insure straight combs. It is, perhaps, not so universally known that each sectional box should be provided with one full sized comb, serving the bees as a ladder. This is especially necessary if the bees are Italians, and is the means of making them take to the second story readily.

Shipping boxes should not be larger than a soap or candle box, containing 4, 6 or 8 sectional boxes. It should not be heavier than 50 or 60 lbs., and a strip should be nailed on the upper halves of the two sides—no handles extending—so that baggage-smashers can see at once "which side up," and get hold of the strips. This insures the cases being placed on their bottom, instead of having them thrown on edge or a corner. Heavier boxes than these should have handles extending. I am speaking of my own experience; parties in other localities may differ with me.

Extracted honey is a luxury, and a medicine, and is in a fair way of becoming a formidable rival of cane sugar. The introduction of grape sugar or glucose diminished the use of glycerine in a few years. Should not honey—the very best of grape sugar—be apt to make short work with its inferior rival?

Breweries use car loads of grape sugar annually. Once convicted of the superiority of honey, a market for our California brethren may be opened. They will not be long in being convinced, if earnest attempts in the right direction are made. The lower price of glucose, will be the first and greatest objection. But we shall have to meet their views. A demand once established, the price of honey will be regulated like the price of other products—by supply and demand. The difficulty with brewers is that they won't admit of their use of grape sugar. They have to be approached prudently. The American Brewers' Gazette, published by John Flintoff, 194 Fulton St., New York, may be a splendid medium.

It is a similar case with wine growers; large quantities of cane and grape sugar are used annually at harvesting time. Not for the adulteration of wine, but, as they say,

to make it more palatable. I am convinced of this being a fact; yet, they don't in general, admit of their use of sugar. I speak of personal experience in the latter case, as I am selling several loads of coffee sugar annually to several of my friends, who tell me confidently, what use they make of it. Several, this year, have tried small lots of honey with the best result. Wine grower's journals should be our mediums. An occasional article in such journals would induce experiments and hasten good results. The editors of our bee papers could do, perhaps, a great deal in this matter, and earn the gratitude of our brotherhood, by a little elaboration in the right direction.

The retail trade depends a great deal on locality, but every bee-keeper should stimulate a home trade. Large cities are the centres for all produce, including honey, but the success of the business depends on the man—his prudent management and fair dealing. Purchasers should, by all means, be convinced that the honey is pure. Remember with what suspicious eyes extracted honey was looked down upon a few years ago; it is astonishing that the trade in it could take such dimensions in so short a time.

Comb honey sells better than it did, because it is put up in a more attractive style; I suppose I could not have found a better medium to introduce machine-extracted honey in this locality than 1 and 2 lb square honey jars. They look neat and sell readily, where honey retails at all. Round jars can be furnished at about \$1 less per gross than square jars; but square jars pack better. A spurious article has been offered for years in our market, in round bottles, and marked, "White clover honey," so that a friend here and myself thought it very desirable to have a different appearance for our "Pure machine-extracted honey."

I send you a case of 1 lb jars of our honey for a test of its merits, as to merchantable shape. This package will also convince you that the tendency of honey to granulate is immaterial to me. My customers are posted and buy pure honey either way.

I wish to speak of the bad habit of sticking a piece of comb into a jar of extracted honey. It looks pleasing only to the eye of the ignorant. Bee-keepers know that extracted honey is the only pure honey, and it should require no piece of comb to convince our friends. I find quite a lot of tumblers and jars in our wholesale houses ill-shaped and unsalable, because honey and comb are a granulated mass.

Now let me give you a little example:—Suppose friend A. has a farm, no matter if large or small, and keeps, say, 50 stands of bees; he raises, perhaps, 5,000 lbs. of honey; he may not do that the first year, and such is not necessary. It is, perhaps, better for him if he raises less. Our friend must learn as we have done. His 5,000 lbs. of honey are apt to realize him \$500; if it does not, he did not get his honey in proper shape. Our friend must learn to comply with the demand of the market. If they realize him only \$400, it is a better business than anything he has on his farm, in proportion to labor and investment. It is true, we have had bad years, but with what crop may we not be disappointed by a poor season?

My own bees, last season, gave 181 lbs. of machine-extracted honey per hive; a sample of which I send you in the above mentioned case. For every one of my stands I have an extra set of combs—every one a worker comb. It requires years to get them in that shape, but now I don't expect my bees to build combs, except when I think it necessary. I have had no natural swarms for the last 9 years, and made only 4 artificial swarms during last season. Hence I expect to commence next season with 26 stands. Should a queen have given out during the winter, I would unite that swarm with its next neighbor; but I don't apprehend losing a swarm on my roof. CHAS. F. MUTH.

For the American Bee Journal.

Black or Native Bees—Italians.

Much has been said and written, for and against, Italian bees. It is claimed by apiarists generally, that Italians are more valuable than native bees, because they produce more honey, are hardier, more prolific, etc. I am somewhat slow to believe such assertions without reliable evidence.

I have observed that several apiarists have Italianized their whole apiaries, sold queens and stocks at advanced rates, because, as represented, they were so much more profitable than the common bee.

About ten years ago, having honey of my own to sell, I used to buy of others, to add to the trade, among whom was a friend living a few miles distant, who kept about 100 colonies; while I kept about 50—with an average yield of 40 lbs. of surplus box-honey—his averaging only about 25 lbs. per colony. I bought his honey several years, with about the same annual average. During this time our bees (his and mine) were all native or common bees. He finally concluded to try the "better kind," and got some Italians. He Italianized nearly his whole apiary, and claimed that the Italians produced about twice as much honey as the others. But I failed to see it. I continued to buy his honey as before, and the average yield per colony was not one pound more than when his bees were all natives. This, to my mind, is pretty good evidence against the idea that Italians are more productive than natives.

The next claim is, that Italians are harder, will work in cooler weather, while the natives remain idle, etc. But as several writers for the JOURNAL have taken the negative of this question, I will add another testimony against this claim.

In the fall of 1874, another friend of mine having 124 colonies of Italians, put them in his cellar, in good condition. I had 27 stocks of natives in the cellar. We both took our bees out about the 1st of April, 1875, all in good condition, except that I had 4 or 5 swarms rather light and weak in numbers.

About the middle of April we had a week of winter weather, which tested the hardiness of our bees, and the result was that he lost one-half of his bees, and the other half were so reduced, that from 62 stocks he got only 800 lbs. of box-honey in the summer of 1875. While from my natives I lost the 5 weaker ones, leaving me 23 stocks in good condition, which gave me 1,100 lbs. of box-honey.

Are not these facts strongly in favor of

the natives, and against the Italians, as having the superiority over them in production and hardiness? So it seems to me.
Fredonia, N. Y. P. MILLER.

For the American Bee Journal.

Notes from Tennessee.

DEAR BEE JOURNAL:—The last season was the poorest for honey I ever knew.

I commenced in the spring with about 50 colonies, mostly in good condition; but the cold weather (March 20 to 23) set them back considerably, by chilling the brood on the outside combs. This frost killed a great many of the poplar blooms in the bud; though enough were left from which to get considerable honey, if the season had been favorable. It rained every day during the first week of the bloom, and afterwards it yielded but little honey. From this bloom I took about 1,000 lbs. of extracted honey. About June 1st, I moved all my bees a distance of 9 miles, to where there is an abundance of linn; but rains set in about the time the trees commenced to bloom, and I only got a little more than 1,000 lbs. from that source.

I had to feed considerably in the fall to keep my bees from starving, and would have brought them through the winter all right, but for the extreme cold weather the commencement of the year. The mercury sank to 20 deg. below zero on the morning of Jan. 3rd, which was 18 deg. colder than I ever knew it before. Several of my colonies froze out entirely, and since the weather has warmed I overhauled the rest and found a great many dead. I am afraid some disease is among them. In some of my strongest colonies I find at least three-fourths of the bees dead, which cannot be altogether from the cold, for in weaker ones I find no dead bees at all; and it is reasonable that a strong colony would stand the cold better than a weaker one. To figure it out the best I can, I will not have more than 25 good colonies to commence the season with.

I heartily agree with you in your remarks on Barnes' foot-power saw. I used one last season for making hives, and would not be without it for double its cost. For sawing timber for frames, and cutting rabbits for the frames to hang on, it can't be beat. Every person who has a quantity of hives to make should have one.

After a while I will give you a history of my two-story bee hive law suits.

J. K. McAllister & Co. did swindle me out of that barrel of honey.

J. F. MONTGOMERY.
Lincoln, Tenn., Feb. 3, 1877.

For the American Bee Journal.

The National B. K. Association—Its Future.

Previous to the assembling of this Association at the Centennial, at Philadelphia, in Oct. last, it was a disputed question as to whether the organization should not be abandoned. In support of such a proposition, it was argued that the expense of attendance incurred by those at a distance from the point of meeting, would more than over-balance any advantage that could be

obtained. And was this sufficient apology for the abandonment of the Association? Had it been, through its representatives, in any sense, neglectful of the purposes of its institution? Are there any influences controlling those who take part in its deliberations, which will prove derogatory to the interests of the bee-keepers of our country? If not, why then should a question arise as to the benefit of the Association? Had we not better pause in our reflections, and in the end heed the admonition of Mr. Clarke, (A. B. J., Vol. 12, page 82) where he says:—"Destroy it not, for a blessing is in it?"

While in attendance at the Centennial, Mr. J. S. Coe and myself had frequent conversations on this subject, which finally led to the potent remarks made by him in the convention of Oct. 25th, and which were published in the A. B. J. And now, to enlarge upon the proposition of Mr. C., permit me here to express the hope that the Association may be strengthened and maintained, as the head of our several State organizations; that these State organizations be sustained by County Societies, and that these again, in turn (where the nature of the case will permit) be assisted by township meetings; thus then can a direct chain be kept up, and we at a distance (through our representatives) can derive as much benefit as though we had participated in the deliberations of our National Association. Upon such a system of operation, we can see no reason why the Association cannot be made permanent, and at the same time productive of lasting good to our bee-keeping fraternity.

The main question to keep in view is:—"Will it be conducive to the interests of bee-keepers in general to sustain the National Association?" whether upon the plan suggested, or upon any one more practical, which may be advocated. One point asserted by Mr. C. in his remarks, we think, will not be denied. And that is: "That the questions of how to dispose of our honey, belong to such bodies." And is this not of itself, excuse sufficient to insure the perpetuity of a chief or controlling organization? We must admit that after all we came down to the matter of dollars and cents. Of what use is our tons and gallons of honey, provided we can find no market for it? There may be a few who follow apiarian pursuits for the pleasure connected therewith, but the great majority of bee-keepers have adopted the profession as a source of pecuniary gain. We could give many illustrations of this fact, but it is already well known to every careful reader of the AMERICAN BEE JOURNAL.

And then again, of how much advantage is it to us to have the remarks and essays of our leading and practical men, upon the different points at issue between us; and we here assert that from no other source can we obtain such information so well as from a gathering of prominent apiarists. How then can we secure such results better than by sustaining the National Association?

There are scarcely any among us, I trust, who assembled at our last Convention, who will be willing to say: "I did not learn anything to my advantage." I dare say that there were none who did not leave wiser than when they came. And is it not a gratification to meet prominent apiarists and our bee-keeping friends generally? It

is very much like the "harvest home" of our farmers, or more like to the annual gathering at our county fairs, to which we all look forward with so much pleasure, and I hope, with profit as well.

Let us then increase our endeavors to place the National Association upon a permanent and lasting basis. If not upon the plan already suggested, why then let others (more competent than we are) set forth such propositions as will ensure success.

Beaver, Pa., Jan. 9, 1877.

B.

For the American Bee Journal.

The Constitution of the National.

FRIEND NEWMAN:—Having received several letters asking for copies of the Constitution and By-Laws of the National Bee-Keepers' Society, and also knowing that there was none at the last meeting at Philadelphia, and having but one copy on hand, I copy that and forward to you with the request that you publish it. I have also gone through all the subsequent meetings and gleaned such resolutions as might possibly be wished to refer to in future.

Yours truly, WM. J. ANDREWS,
Pres. N. B. K. Society.

CONSTITUTION.

ARTICLE 1—NAME.

This organization shall be known as the North American Bee-Keepers' Society, and shall meet annually.

ARTICLE 2—OBJECT.

Its objects shall be to promote the interests of bee-culture.

ARTICLE 3—OFFICERS.

The officers of this Society shall be a President, one Vice-President from each State, District, Territory or Province represented; Secretary, Recording Secretary, Corresponding Secretary, and Treasurer, whose duties shall be those usually performed by such officers. They shall be elected by ballot, and hold their offices for one year or until their successors shall be elected.

ARTICLE 4—EXECUTIVE COMMITTEE.

The President, Secretaries and Treasurer shall constitute an Executive Committee.

ARTICLE 5—MEMBERSHIP.

Any person may become a member by giving his or her name to the Secretary and paying one dollar, excepting ladies, who shall be admitted free of charge.

ARTICLE 6—HONORARY MEMBERS.

This Society may from time to time elect suitable persons as honorary members.

ARTICLE 7—SPEAKING.

No member shall be entitled to the floor more than five minutes in the discussion of any motion, resolution or petition, without consent of the Society.

ARTICLE 8—COMMITTEES.

All committees shall be elected by ballot, by a plurality vote, except by special resolution.

ARTICLE 9—MEETINGS.

Each annual meeting of this Society shall be held at such time and place as shall be designated by a majority vote at the preceding regular annual meeting.

ARTICLE 10—SPECIAL MEETINGS.

A special meeting may be called by the Executive Committee at any time on requisition of five of the Vice-Presidents.

ARTICLE 11—AMENDMENTS.

This constitution may be amended at any annual meeting, by a two-thirds vote of all the members in attendance.

Adopted at meeting at Cleveland, Ohio, Dec., 1871.

CONSTITUTION AMENDED.

Article 5, amended as follows: Any person may become a member by giving his or her name to the Secretary, and paying an annual fee of one dollar, except ladies, who shall be admitted free of charge. Adopted Dec., 1872.

SOCIETIES.

Resolved, That the President of this Society be authorized in its name and behalf, to address a circular to all the bee-keepers of this continent, urging the formation of neighborhood, county, state, territorial and provincial associations, auxiliary to this Society. Adopted Dec., 1872.

For the American Bee Journal.

An Easy Cure of Foul Brood.

I find in the *Rucher du Sud Ouest*, of Bordeaux, France, an article translated from a German paper—the *Deutscher Bienenfreund*—on this malady; and I reproduce it for the A. B. J., with the hope that it will be found interesting.

CH. DADANT.

"On June 21st, I discovered that a colony received from Baron Rotschultz, of Posendorf, Carniola, had become foul broody. A few days after its arrival, in spite of feeding, the number of bees did not increase. But as foul brood is unknown here, and as I had never seen this malady, I thought that the small quantity of brood, the lack of industry and desire to build combs were the result of weakness or old age of the queen; and I resolved to replace her, on the first opportunity, by giving the hive a queen cell. I gave the colony some brood from other hives, but the sickness of the colony increased, and I began to smell a peculiar odor, which increased and seemed to come from the fermentation of a liquid substance. Then I resolved to further examine the hive.

"I saw that the bees were mainly on the brood combs that I had given them, and that the brood which came with the bees from Posendorf, was altogether isolated; that the cappings of a dozen cells were deeply pressed down; that all the honey in the uncapped cells (there was no other in the hive) was fermenting, and that the bad smell came from the combs from Posendorf. I cut with a pen-knife some of the cells whose cappings were pressed down, and saw the brown matter they contained. Then I discovered the cause—foul brood.

"I had on hand a little salicylic acid—a substance which is very dear. Then my eyes met a vessel full of soda. Soda stops fermentation more readily than salicylic acid. I resolved to try soda, before getting salicylic acid. I prepared a pail-full of a

strong solution of soda and water, warmed by the sun. The first frame was dipped in the solution several times, together with its bees and honey. A few bees swam, the others clung firmly to the comb and were put back with it in the hive. I gathered the swimming bees with a skimmer, and put them in the sun to dry. None of them perished; after a few minutes all returned to the hive. Fermentation and smell disappeared immediately from the immersed combs."

"After this I dipped in the soda, all the combs coming from Posendorf, with their bees and all. The queen had fled to the sound combs that I had given the colony. Mr. L. Krancher, publisher of the *Bienenfreund*, visited my bees and also noticed the foul state of this hive. A few days after I resolved to bathe the queen in the alkaline water, when I noticed her foul smell. For the bath I used 250 grammes (about 9 ounces) of carbonate of sodium, in a pail of water, containing 8 or 10 litres, (quarts) in which I mixed a little salicylic acid.

"The result is complete so far, July 15th. The smell of the hive is normal; the brood is fast spreading; there is now capped honey in the hive; the bees now show some readiness to sting; they had none while they were sick; the pressed cells that I had opened before the bathing, have disappeared to such an extent that it is impossible to detect one, even with the most careful research; and the bees begin to fill their empty frames with comb.

"This remedy seems more advantageous than the solution of salicylic acid, not only on account of its cheapness—10 centimes (2 cents), instead of 3 francs (75 cents)—but also on account of its prompt effect. Instantly—the bees, queen, honey, brood, combs, frames, and everything was purified of the disease.

This remedy was not only administered externally, but as the bees were compelled to suck the lye mixed with the honey, the disease was annihilated in their stomachs. The bathed bees were also purified externally. The drying of the wet bees and of the combs was soon completed by the warm weather: That the bath kills the uncapped brood, is of very little consequence, when compared with the other advantages of this remedy.

A. C. KERMANN.

Thurm, Germany.

Important Mistakes made by Bee-Keepers.

READ BEFORE THE MICH. B. K. ASSOCIATION, DEC. 21, 1876.

The profits of rational bee-keeping are little understood, and if stated, would be still less believed. Since keeping bees—if I except disaster in wintering, which has only occurred twice—I have never failed to secure 200 per cent. net profits, and have often realized over 300 per cent. I fully believe the losses need not be repeated.

But granting that these are occasionally imperative, with the combs and honey still left at my disposal, I could purchase again in the spring, and still secure 100 per cent. on my outlay. This is no guess-work, but a fact built on the secure foundation of past experience, and can only be denied on the

ground that there is to be a revolution in the affairs of bee-keeping. The world is coming more and more to disbelieve in revolutions.

But, say you, such results are not common. The apiarists of our country are not the millionaires, nor indeed have their bank-credits been such as to occasion wonder or even remark. But, mind you, I said *rational* bee-keeping. Is it not true that most bee-keepers make this an avocation, a mere supplementary pursuit, which, though they often admit it brings the best returns, still receives only the fag-end of their time, thought and energies? Again, a large per cent. of the bee-keepers let the apiary run itself. They give it no thought, no study, and very little attention. They can not afford to take a bee journal, and as for reading bee books, they have no time and less inclination. What wonder their song is burdened with loss? and what wonder that apiculture, which has to carry such weights, loses prestige among employments? Just as with farming, or any art or profession, where the representatives are ignorant and unthinking, she loses caste. To be sure, we have very many laborers in this field, and I am glad to know that the number is increasing, who, like Adam Grimm, love this vocation, and make it a continual subject of thought and study. I am glad to know that such men are also following in the wake of the one already mentioned towards the haven of competency.

The merchant, even with the closest attention to business, the utmost caution and the best study of the markets, treads an uncertain road; the lawyer and the physician find the walls of competition so high that success seems problematical, even with the severest thought and closest study; while the apiarist, if he will only study to know his course, thinks that he may never miss his bearing—and this very thought and study will yield a double blessing, in that it brings rich entertainment—he will be almost sure to win success, and that too with but little labor.

There are many breakers that stand in the way of the ignorant and unthoughtful apiarist, two of which it is my purpose to present on this occasion. And first I will speak of

QUEENLESS COLONIES.

It is well known that a good queen will lay upwards of 2,000 eggs daily; and as 20,000 to 30,000 bees make a strong colony, it at once appears that the loss of a queen in a full, strong colony for 10 or 15 days is equivalent to the loss of a good stock of bees. That there is this loss in bees is not always true, for with loss of queen the work sometimes ceases in part, and the mortality with the old bees is less; but this lack is of course met by the diminished stores of honey. I have no hesitation in affirming that the loss of a queen in a good colony for 15 days in the gathering season means the loss of a good colony of bees. But is this common—this loss of a queen—with our apiarists? I reply that with most of them it is not only common but universal.

Let us suppose that colonies are allowed to take their natural course in swarming. The bees almost invariably leave the hive before the queen-cells are capped. Suppose in one day these are capped. In seven days the queen comes forth. For five days she remains a virgin, while unfavorable

weather or other misfortune may prolong this for two or three days. Two or three more days must elapse before she commences her life's work, and thus we have at least 15 days with our colony destitute of a queen. Hence I affirm that bees are left to take their natural course, in increasing, at a necessary sacrifice of one good stock of bees.

Suppose the apiarist commences the season with 20 colonies, follows natural swarming in its entirety, and values his stocks at \$8 each. His total loss will be \$160.

The remedy for this is known, of course, to every intelligent, well-informed apiarist. We have only to raise, early in the season, a good supply of extra queens, which will be kept in nuclei, and used as occasion requires. Then, when a colony swarms—which is almost sure to be when gathering is most active, and when loss of a queen will be most felt—a new queen will be given at once to the old colony, and there will be no cessation in its prosperity. Or, still better, new colonies will be formed artificially, and given a queen at once, in which case we can secure against too great depletion of bees, which is quite sure to result, unless much caution is exercised, if natural swarming is permitted.

By thus keeping a good supply of young, fertile, and prolific queens ever in readiness, we may not only prevent expensive delay in time of swarming or of increasing, but may supply the place of any queens which may be lost or killed in handling our bees; or we may supersede any queen which from age or other reason seems to lack in fecundity.

The rule, then, which I would state and enforce, but which is now so generally disregarded, either from ignorance or still more culpable indolence, and which no apiarist can afford to neglect, is: *Never permit a colony to be without a prolific queen.*

The second error to which I would call attention is enforced idleness of the bees, consequent upon ill management on the part of the apiarist. This may characterize either the queen or the workers or both, and may arise from a plurality of causes. First we will consider the

IDLENESS OF THE QUEEN.

The queen may be forced to idleness, either from idleness of the workers, when her instincts impel her to partial or complete indolence, or she may cease from laying simply because there are no empty cells in which she can deposit. During the past three years, and especially during the past season, I have been observing with particular reference to these two points, and can assure all of their truth. In fact, they can be so easily verified by all that I will not wait to detail the proofs.

The remedy for the first cause—idleness of the workers—will appear in the sequel. The remedy for the second—no empty cells in which to deposit—is most easily secured in that invaluable auxiliary of the apiary,—the honey extractor. I have proved this autumn, during the wonderful yields of honey from the golden-rods and other autumn flowers, that the queen may be entirely cheated out of room in which to deposit, even though there be abundance of room in the supers. In such cases, the use of the extractor should *never* be dispensed with, and would be a wise proceeding even

though we had to give away our extracted honey.

The second rule which I would urge upon all apiarists is: *Never permit the hive to be without empty cells in the brood combs.*

We next come to consider the idleness of the usually busy workers, the causes which lead to it, and the remedies which may be applied.

The fact that bees are not always busy at their legitimate business is known to all apiarists. Who has not noticed the idle cluster, when bloom is everywhere, and when nectar bathes every floral envelope? Who has not been vexed in his apiary labors, during a dearth of bloom, by swarms of his little workers ever on the alert to add to their stores? And what novice has not been sorely alarmed by the robbing which he has induced, by his ignorance or carelessness at such times? That this idleness is enforced is shown by all literature, and by the many current proverbs which are adorned by reference to our pets of the apiary:

"How doth the little busy bee
Improve each shining hour?"

Let us now inquire into the causes which thus compel the active workers to a course which is so contrary to their taste.

CAUSES OF IDLENESS.

1. We notice the most apparent cause—absence of bloom, or the failure of flowers to secrete honey. In all localities there are periods—longer or shorter—when honey bloom is not. In some localities these periods are so frequent or so protracted that successful apiculture is quite impossible. I have found, too, that during wet weather, when rains were of daily or very frequent occurrence, even the best honey plants failed to secrete. Last summer, our white clover season (during the entire month of June) was a complete failure on this very account.

2. If the bees have too little room, or so fill their hives as to preclude further storing, they must of course drink the bitter draught of idleness, whose evil work is shown by their dejected look, as they hang, all forlorn, in front or beneath the hive.

3. It is not infrequent that bees, especially if unshaded during the intense heat of our summers, find their hives a veritable furnace, which, despite all their efforts at ventilation, become uninhabitable. There is a profusion of bloom and the precious nectar fills every corolla tube. The bees long to convey this to their homes, but their hives being a very oven, as it were, they must perforce forego the precious opportunity, when they show their utter dejection by their abject stupor as they cluster outside their hives.

4. Bees that become hopelessly queenless—that is, lose their queen when there are no eggs or brood to enable them to restore the loss—often become totally demoralized. In fact, so great is their discouragement that their very nature and instincts become reversed, and instead of being the "busy bees," they are characterized by indifference and idleness.

5. Our bees may become discouraged and idle, as the result of depletion. They become weak, either from over-swarming or other cause; become a prey to robbers, or the bee-moth; and finally, losing all heart, fold their arms (or wings), and

in hopeless idleness, await their certain doom.

REMEDIES.

Let us now consider the brighter phase of our subject—the remedies for these evils, which, as I shall show, are in easy reach of the apiarist, and without which he might well feel that the silver lining to the clouds that hung above his business was all too dim to keep hope alive.

Of course, a wise location of the apiary will do much to remedy the first evil. If the region abounds in fruit trees, if white clover is abundant, and even where it is not, if there are yet standing the grand old forests—God's first temples—with their graceful maples, broad-spreading linn, and beautiful tulip trees. If added to this there are, hard by, ample marsh land abounding in solidagos (golden-rods), asters, eupatoriums, (boneset), cereopsis (tick seed), bidens (beggar-ticks), etc., etc.; then the apiarist can hardly escape an annual experience, which shall make him to rejoice in peace and plenty. If the apiarist is not thus fortunate, he may yet hope to do much to insure success. He can hardly escape fruit blossoms and white clover, white alsike clover, rape, black mustard, and mignonette may be made to take the place of linn, and may all be raised with profit for other purposes, and in lieu of natural fall-bloom, buckwheat and various mints, may be grown; while the Rocky Mountain bee-plant would serve a valuable auxiliary, and may prove profitable to raise on account of its seeds.

The evil of damp, wet weather is one with which it is hard to cope. Yet such seasons are full of hope, as they promise rich future bloom, when the days shall be bright again. It is possible, too, that farther investigation may reveal plants which shall yield richly of honey, and yet be independent of even the most copious rains.

In the spring and during the interims of honey secretion, all through the season, the bees may be kept busy, and the queen thus active, by feeding. This can be done at slight expense, as $\frac{1}{4}$ lb per day to a hive is quite sufficient, and I have proved repeatedly that it pays richly for the expense and trouble.

The second evil is so easily remedied that we should hardly suppose it ever need occur; and yet I feel safe in averring that could I accurately state the amount of loss from this cause each year, I should present an array of figures that would startle you. It is not only necessary that the bees have room, but room they will utilize. Boxes, tier upon tier, may be placed above the hive; and yet, if the bees for any cause fail to enter them, they are as effectually balked in their industry, providing there is no other space, as though there were no boxes. This is one of the most common causes of that outside clustering, which is so repellant to the instincts of the bees and so vexatious to the apiarist. The remedy then is to always provide in time of honey secretion abundant room for storing; and if boxes are used, place them very near the brood combs, and if necessary introduce a little comb with uncapped brood in it, so that the bees may enter them. If they will not enter them, some other arrangement must be adopted, such as making use of long hives, or half or full upper stories, in which frames may be placed.

The third evil—too great heat in the hive,—may be easily overcome. We have only to arrange so that our hives may be shaded during the heat of the day. This should never be neglected. I have often set a full cluster of bees vigorously at work, simply by placing a board a foot or more above the hive, thus tempering the intense heat of the interior. Let no apiarist longer persist in the habit of leaving his bees unprotected. Let mercy as well as profit urge him, either by use of friendly tree, evergreen, grapevine, or boards, to see that his hives are shaded from 9 to 4 o'clock, especially as the heated days of May and June send aslant their scorching rays.

The remedy for the fourth trouble—queenless colonies—has already been answered, while speaking of queens.

The last point to be urged is to always keep our colonies gushing full of bees. It is with bees in a colony like children in a home. You can't have too many. Then robbing is unknown, the bee-moth impotent to do harm, while the gathering of stores is so rapid as to make the apiarist rejoice with exceeding joy. To secure populous colonies, we have only to follow the advice already given, and supplement this course by preventing swarming, or at least cutting short after our second swarms. The greatest argument in favor of artificial colonies (and is a powerful one) is, that we may thus keep all our colonies strong.

Were I asked to give the golden rule for bee-keepers, I would answer, *Keep the colonies strong.* A. J. Cook.

For the American Bee Journal.

Our Interests.

Wm. J. Andrews, president of the National Society, asks: "If there are any opposed to a national organization... why?"

I, for one, am so opposed. First, because of the expense of reaching its location. Second, because it is tending to forward the over-production of honey, and working against the interests of the solid back bone of the pursuit, viz., those who produce for their income. Such conventions, no doubt, are beneficial to the supply dealers, and I do not blame that fraternity for trying to blow the breath of life into them. Such a course is your privilege, and perhaps a duty to your family, but my duty is different.

I claim that honey is being greatly over-produced, and that the over-production of any article is not only bad for the producers but for the country also. But for argument sake, I will suppose that such are working for the benefit of their country, and against their own interests. Now I claim that the idea that a child owes its parents an everlasting debt for its existence and care, and that the citizen owes his country that same debt, is utterly false. We have three children who came into our family and our country, without their consent or even being consulted in regard to the matter. Now we owe them as good care, education and general bringing up as we can possibly bestow upon them. Their country owes them a debt she often refuses to pay, viz., an equal chance with their contemporaries, and no more. If my family should come to want, the world is cold, and the poor-master says "for shame; he was a theorist, and never had an eye on the main chance."

The honey producers of this country want a publication devoted exclusively to their interests. They also need economical and select county or sectional meetings, and these, I predict, they are going to have.

I say honey is now over-produced. First, honey will always remain a luxury, at any price which will pay for production. Mark this: A party to whom I sold \$12 worth of honey in glass jars, says, "We cannot handle any more honey at any price, our agents find it so plenty everywhere they offer it." The same cause has driven C. O. Perrine out of the honey market, but see how he handles maple and cane sugar syrups. I am inclined to be more charitable than my opponents and give them the credit for honesty; for I verily believe that these speculative, amateur and supply-vending bee-keepers do not see the facts in the case and where bee-keeping is tending.

They are sure to tell us about Adam Grimm. If I could have Adam Grimm's chances I would bet on a competence in 5 years. Adam Grimm lived and labored in the right time. He had "war prices" for his honey. He had lots of bees (as I have now) when these prices began. He had an extractor when bee-keepers had the benefit of it, instead of the consumer. Through good luck, or good management, he wintered his bees when ours died, and sold to us at \$12 to \$15 per colony. When we must have yellow bees, again he came to the rescue at \$5 to \$8 each (not \$1 each). Adam Grimm was a strict economist; in other words a smart financier, and such men often make five times their pile in the same time at almost all kinds of businesses. Please, trumpeters, let Mr. Grimm rest in peace.

A. I. Root was pleased to help the Saranac man "churn" me, because I plead with bee-keepers not to put poor extracted-before-uncapped honey on the market. Now, see how he rides my horse. He says, "I feel like being rash enough to say I will never extract any more honey until every bit of it has been sealed; and if keeping it in the hive several weeks more will prevent its candying entirely, don't know but we shall do that too."

Why don't his Christian spirit feel like lifting some of the load he has heaped on me by merely saying, "May be Heddon and others are right about ripe honey?" We said long ago that time would verify all the predictions of to-day. When the demand for theoretical hobbies and chicken-fixing supplies is over, A. I. Root will be found, like Gallup, dealing out Watt's pills, or some other middle man-ism! Mark this also!

When you meet a man who loves you at first sight, look out for him. Use your reason. You who really believe bee-keeping is a big thing, remember where the dollar store business landed, and try and keep it big as long as you can. If you have a good locality for forage, or a high-toned home market, write it up just as soon as possible, so cheap-honey fellows can know where to ship. Every business, like Gallup's pills, seeks its level.

Mr. Andrews, like many others, says: "Bee-culture needs such meetings." I don't know what bee-culture does need. I don't know where it lives. Never heard it sigh or laugh! Don't think it needs anything, but bee-culturists need money as much as any class living, and while Bro. A.

spends his sympathies with the pursuit, I will try and look somewhat to the interests of the pursuers. The AMERICAN BEE JOURNAL rides victoriously above all others, probably because it is more closely devoted to the best interests of the present honey producers, and don't toggle on any outside issues!

Gentlemen who hold an interest different from mine and producers generally, and who believe differently from us, we accord to you your right to speak your little pieces. When you choose, to defend your special interests, and we feel no ill-will toward you; but you will show your good sense by always keeping your temper, and allowing us the privileges we grant you.

Perhaps enough has already been said upon this subject, to suggest to each bee-keeper the proper course to pursue. "Straws show which way the wind blows." My sympathies must ever be with the producer, though I shall embrace the first chance to sell out at no large sacrifice, and go to fruit raising, as has H. E. Bidwell, of South Haven, one of our finest practical apiculturists and horticulturists. I notice the demand for fruit is so common and persistent, that right here in this fruit country hundreds of 1, 2 and 3 lb cans are sold from each grocery each season, and the same shipped in here from thousands of miles away. If honey would sell thus, we might say, "Amen." I may be too much discouraged; but I think not. I have a much better chance to feel the public honey pulse than many others. JAMES HEDDON.

Dowagiac, Mich., Jan. 4, 1877.

P. S.—Allow me to thank Mr. J. P. Moore for his able and manly effort (read at our State Convention) to help the honey producers of this country. No doubt but that we all accord with W. F. Clark's views expressed on page 13, 1877, that "We want a bond of sympathy and union, like the engineers," and don't forget that the object of their conventions is to forward the interests of the already existing engineers, a part of which is to not flood the country with engineers, to the harm of those already engineering, and ruin of the new comers.

J. H.

For the American Bee Journal.

Union Apiary.

The harvest is over, the summer ended, and now the question is: "How many of our colonies will be saved after this long winter?" How anxiously, as the buds commence to swell and fruit trees throw out their bloom, will many bee-keepers hold their ear close to the side of the hive, rap and listen in vain for the cheerful hum of the departed? If you have, until now, neglected to give your colonies sufficient protection, and failed to cover the frames with proper absorbents, with sufficient stores in each colony, it is of no use now for me to counsel you, except to say: "Let them alone, and like an old foggy, trust to luck." If warm weather comes, and the bees are flying, you may put some cream candy or even lumps of crushed sugar over the frames, and cover them up with a piece of clean carpet or woollen blanket. I don't like quilts made of cotton batting; they retain the moisture, and I have seen them even wet; in this condition, of course, they

are very cold and injurious. Old worn-out felt skirts are just the thing to spread over the frames for wintering.

Now the bees in the Union Apiary are all tucked away in good warm hives (on their summer stands), and we confidently expect to bring every colony through safely, as we have done for three winters.

The prize essays of Prof. Cook and Rev. E. C. Briggs, published in the A. B. J., for Dec., will well repay for a year's subscription. I am glad, Mr. Editor, I was not one of the committee to determine which of the above were entitled to the prize. My private opinion, publicly expressed, is that it is a drawn game.

The hive we are using in the Union Apiary is "Carpenter's porous, double-walled, back-acted bee hive." (You needn't laugh!) It is really a back-acted bee hive, a desideratum never before attained in a bee hive. A door lets down behind, making a platform, and a single frame of the entire brood frames can be pulled out on this platform without disturbing the frames or boxes in the upper story, or interfering in the least with the working of the bees in front of the hive. We did intend to patent it, and to send it to the Centennial for exhibition, but could not raise the needful.

SED G. WICK.

For the American Bee Journal.

Bee Lice.

CH. DADANT:—May I ask you to answer the following questions:

1st. Are you familiar with the European bee louse, *Beaula cava*?

2d. If so, do you regard it a serious pest?

3d. Have you ever detected it on any of your imported bees, either queens or workers?

4th. If you had introduced a queen, late in the autumn, and after the act, had found lice on the workers that were caged with her, what would be your course with the colony containing the queen?

I desire these answers for the good of the public.

A. J. COOK.

I never saw bee lice in my apiary; yet at three different times during ten years of importing business, if I remember right, I have seen a *Braulta cava* on the corslet of imported queens, on their arrival here. Of course I killed them. My children also remember having seen one or two of these parasites crawling in the boxes, in which dead queens had been received from Italy. I do not remember having seen lice on worker bees, either imported or home-bred. Having had so little experience with this parasite, I am not prepared to answer Prof. Cook's other questions; so I will quote some from the European bee papers.

In the Italian bee journal, *L'Apicoltore*, for 1870, page 220, Prof. Cornalia, of Milan, gives a lengthy and elaborate description of this insect, and its natural history. From it I translate the following:

"This insect first described by Linneus, in 1746. Linneus gave it the name of *Acarus Gymnopteron* (the last word is derived from two Greek words: *gymnas*, gymnastic, and *plethos*, multitude; *acarus*, performing; hence they are said to perform gymnastics in multitude). This name was maintained by several other naturalists till

1818, when Nitzsch changed it to its present name—*Bracula cæca*. *Bracula*, Greek, means louse, and *cæca*, Latin, means blind. This insect is eyeless."

I will not give here the description in full of the insect, for it would be tedious to those who are not scientific men. I will only say that this louse is of reddish brown, and sometimes pale yellow color. Its body is globular, convex, and thickly covered with hairs; its length is about $\frac{1}{2}$ or $\frac{3}{4}$ of a line. This parasite is generally found around the thorax, where the bee cannot reach it. It is admitted that it cannot suck through the scales of bees, and that it inserts its proboscis into the joints of the body.

Prof. Cornalia was not at the time acquainted with the mode of reproduction of the bee louse. To find it, I have in vain perused the European bee papers; but in "Packard's Guide to the Study of Insects," page 419, I find the following: "The larva of the *Bracula cæca* is headless, oval, eleven jointed and white in color. On the day it hatches from the egg it sheds its skin and changes to an oval *puparium* of a dark brown color."

From this I infer that the eggs of bee lice are deposited in some corners of the hive, where the larvæ develop themselves by subsisting on waste matter. The larvæ of flies and fleas, who are of the same genus, have similar habits. Therefore, if hives become infected with bee lice, their owner can easily get rid of them by carefully cleansing the bottom-board and corners of the hives, and by washing them with diluted carbolic acid. The lice on the bodies of bees will thus be prevented from reproducing themselves, and the bees will be freed from them by the natural death of all of them.

It is generally admitted in Europe that this pest is prevalent in unclean apiaries, where hives are for years carelessly left to themselves.

Now I will translate an article, on this insect, from *Le Rucher du Sud-Ouest* (French), Sept., 1876, page 199:

"*La Ferme Suisse*, in the Sept. number, publishes an article from M. C. De Ribeancourt, on the influence of drought on the scarcity of brood, and on the prevalence of bee lice on the body of queens.

"The observations of M. De Ribeancourt on lousy queens, are interesting, on account of his having found a way to free the queens of these parasites, by the help of tobacco smoke. One should be thankful if the remedy is effectual; for to this day no sure remedy was known.

"We think that it would be interesting if the observations of M. De Ribeancourt were introduced by a remark that we ourselves have had the opportunity to make.

"On the 6th of this month, in a very populous hive, full with brood and honey, the queen, who is 1 year old and seems active, was covered with lice; some pale yellow, others reddish brown. The latter being numerous. We were unable to count them; about 30. The hive is exposed at the north. It is raised about 2 ft. from the ground, which is dry and sandy. What seemed most remarkable in this observation, which was made in the presence of several persons, is that according to several authors, the yellow louse is rather scarce, and the spreading of the reddish brown one

is favored by moisture. Yet God knows that we have had enough drought in Bordeaux this year."

Mr. T. Sourbe, the writer of the foregoing, is the able editor of the *Rucher*. I wish he would try the means that I have indicated. Below is the translation of the article of M. De Ribeancourt.

"A fact which struck us this year while visiting several apiaries, is that in the mountains, on the Aug. 25, we found nearly every hive broodless, no matter what their strength; except those whose queens were raised in July. This fact, the only one of its kind in many years, must be attributed to the lack of honey, in consequence of the drought.

"We have found very few larvæ of the bee moth, while on the other hand we have found several queens covered with lice. We have counted as many as 70, which covered the body of a single queen; yet the hive of this queen seemed to be perfectly prosperous, although it had not a single bee larva.

"When the queen was freed from the parasites, she was observed brushing her head with her anterior legs, and seemed to enjoy a comfort to which she was not accustomed. Two days after she had lice again, but in less numbers, and we noticed that when tobacco smoke reached her, the lice left while she was making her way through the workers.

"We consider the life of this queen in danger, and we doubt very much whether she will live over the winter. We will subsequently continue our observations."

I must add that according to several reports, the health of a queen is not altered by a few lice, though she seems annoyed and excited. But from 30 to 70 on the same queen would endanger her life. Such a number can be checked by a thorough and oft-repeated cleansing of the hive. If I had a lousy colony I would keep it for experiments, and to learn what time it would take to get rid of these parasites.

CH. DADANT.

For the American Bee Journal.

Points for Reporters.

Until we can so solve the problem of wintering as to reduce it to a practical certainty the business of bee-keeping will partake much of the character of a lottery; the most thoughtful calculations, the most rational expectations may, by a few days of unprovided-for severity, be entirely ruined. This problem, like most other practical questions, will not be solved by the cogitations of some theorizer who has no practical acquaintance with bees. It will be solved by the experience of intelligent bee-keepers.

Among bee-keepers there is now a large number of men and women to whom the business is greatly indebted for the results of their experience. They have carefully watched the little workers, attended to all their needs both in summer and winter, and have frankly stated their success or failure, for the help of others. To these careful observers and honest reporters we look now for the solution of the problem of wintering.

The present long and cold winter offers a favorable opportunity for observations under the severest conditions as to low temperature. For more than two months the

weather throughout the Northern States has been cold; for a large part of that time it has been very cold. A good many bee-keepers will bring their bees through with slight loss; a good many will probably suffer serious losses. A clear statement of the condition of the hives in the fall, and of the method pursued in wintering, both by the successful and the unsuccessful ones, will be of great value to the bee-keeping industry. The AMERICAN BEE JOURNAL cannot better serve its readers than by publishing clear and full reports upon this subject from as many quarters as possible.

1. All reporters should state the kind of hive, the size and number of frames, the quantity and age of bees, the amount and quality of stores, the amount of stores consumed, the kind and amount of ventilation in hives, the number and kind of passages through the combs, the time when bees had their last flight in the fall, and the times of the earliest flights afterwards. Then give the success, good or bad.

2. Many bee-keepers have wintered on the summer stands, without any protection. Let such state, in addition to the above, the location of the hives as to exposure to the wind and sun, and the range of the thermometer. State fully the length and severity of the long spells of cold weather, and any great and sudden changes.

3. Some apiarists, last fall, left their bees on the summer stands, giving them protection in some shape. Let each state the kind and amount of the protection. Let us have especially a full record of methods and of success or failure from those who have packed their hives in chaff, chaff-cushions, straw, shavings, or other material. Give in full the expense of such methods.

4. Some have put their bees in rooms, clamps, and various receptacles other than cellars. State the character of receptacle, its dryness, ventilation, temperature, condition of bees when put in and at any other examinations; give expense.

5. Doubtless a large number have their bees in cellars. Many are looking in this direction for a satisfactory solution of the problem. State character of cellar, dryness, highest and lowest temperature, average temperature, height of cellar from floor to ceiling, ventilation, height of hives above floor, distance of hives beneath ceiling, difference, if any, in condition of hives near floor and those near ceiling, condition of entrances to hives, condition of bees at different examinations.

Reports from different sections of the country, embracing accurate statements on the points suggested, and on any other points that may occur to practical men, will be of incalculable value to the guild of bee-keepers.

Keokuk, Iowa, Jan. 26, 1877.

O. CLUTE.

The Honey Bee.

The honey bee is an inflammable bug, sudden in his impresshuns and hasty in his conclusions, or end.

His natral disposishun is a warm cross between red-pepper in the pod and fusil oil, and his moral bias is, "git out ov mi way."

They have a long boddy, divided in the middle bi a waist spot, but their phisikal importance lays at the terminus of their subburb, in the shape ov a javelin.

This javelin is alwas loaded, and stands reddey to unload at a minit's warning, and enters az still az thought, spry az litingen, and as full oph melankolly az the toothake.

Bees never argy a case; they settle awl ov their differences ov opinyun bi letting their javelin fly, and are az certain tew hit az a mule iz.

This testy kritter lives in congregations numbering about 20,000 souls, but whether they are male and female, or conservative, or matched in bonds of wedlock, or whether they klub together and keep one wife tew save expense, i don't kno nor don't kare. I never examined their habits mutch, i never considered it helthy, for what would it profit a man tew kill 99 bees and hav the 1 hundreth one hit him with his javelin?

The drones seem alwas bizzzy, but what they are about the lor' only knows. They don't lay up enny honey, they seem tew be bizzzy only gist for the sake ov eating all the time, they are alwas in az much ov a hurry az tho they was going for a docker. I suppose this uneasy world would grind around on its axle-tree onst in 24 hours, even if there want enny dones, but drones must be good for something, but i kant think now what it iz. There haint been a bug made in vain, nor one that want a good job; there iz ever lots ov human drones loafing around blacksmith shops, and cider mills, all over the country, that don't seem tew be necessary for enny thing but tew beg plug tobacco and swear, and steal water-melons, but you let the cholera break out once, and then you will see the wisdom ov having jist sich laying around loose, they help kount.

Bees are not long-lived—i kant state jist how long their lives are, but i kno, from instinct and observashun, that enny kritter, be he bug or be he devil who is mad all the time and stings every good chance he kan git, generally dies early.

The only way tew git the exact fiteing weight ov the bee, is tew touch him, let him hit you with his javelin, and you will be willing tew testify in court that sumboddy run a one-tined pitch-fork inter yer; and az for grit, i will state for the informashun ov those who havn't had a chance tew lay in their vermin wisdom as freely az i hav, that one single bee who feels well will break up a large camp meeting!

What the bees do for amusement iz another question i kant answer, but some ov the best read and heavyest thinkers among naturalists say that they hav target excursions and heave their javelins at the mark; but i don't imbibe this assurshun raw, for i never knu enny boddy, so bitter at heart as the bees are, to waste a blow.

There is one thing that a bee does, i will give him credit for on mi books—he alwas attends tew his own bizness, and wont allow any boddy else tew attend tew it, and what he duz he duz well, you never see him altering enny thing, if they make enny mistakes it iz after dark and it aint seen.

If bees made haff as menny blunders az the men do, even with their javelins, every-boddy would laff at them.

In ending oph this essa, i will cum tew a stop by concluding, that if the bees waz a little more pensive, and not so darned peremtory with their javelins, they might be guilty of less wisdom, but more charity. But you kant alter bug nature without spiling it, enny more than you kan alter an elephant's egg.

JOSH BILLINGS.

For the American Bee Journal.

Honesty is the Best Policy.

In the Oct. number of *Gleanings*, page 245, Novice says, in speaking about comb foundation, he has paid all claims for damages, and mentions a claim of Mr. Burch for \$50. Now I for one protest against such a fraud. What does Mr. Burch claim damages for? Because, as he says, his comb foundations were made a little thicker than he ordered them. Now for the result.

"The queens would not lay in it." Why, of course not, if the queen had plenty of room and too few bees, either to fill up with honey or cover the brood.

"That it is raised into comb much slower than they build natural comb." Certainly, a new swarm might do it, provided it was twice as strong as the one the foundations were in.

"That the honey is not saleable after it is stored." Now, in all my experience with foundations I never had any such trouble, nor any one else that I am acquainted with. It is true with unbleached wax, you will sometimes see a light yellow streak in the centre of a comb, but never enough to damage its sale; at least not half as much as if the boxes had been filled with old dark combs, as I was informed a Michigan bee-keeper did, and sold it in Chicago for first quality comb honey.

Does any one think that Mr. Burch's claim for damages is an honest one? Allow me to give the evidence that convinces me it is not. The Michigan bee-keepers for some time back thought that they were in possession of some new and valuable ideas that would ultimately revolutionise apiculture in America; but some who had been through the mill said, wait and we will see. They had not to wait long. It is quite common to boast of superior knowledge and skill when there is a rich honey harvest, but let a poor season come and it brings them down to the level of common folks.

Now hear the wailing of Mr. Burch, and out of his own mouth will I condemn him by making a few extracts from the *Bee-Keepers' Magazine* for Sept., page 205:—"The season with us has been a *peculiar one* (the italics are mine). Grim winter persisted in lingering so *very late* in the lap of spring that the hosts of 'bee-dom' were few and far between, when the balmy days of *June* had come. Although June opened auspiciously for the apiculturist it will be remembered by that individual as the *deluge* of 1876. *Day after day* did the heavens unfold their liquid treasures, until men began to inquire, 'Will it never cease to rain?' Still it continued to rain. Our rainy season reached its terminus in the *latter part of June*. The poor, drenched earth received 14 inches of solid water. Basswood began on July 10th, closed on the 20th; lasting only *one-half as long as usual*. Since July 20th the bees have been *idle*, so that at this date (as no date is given I suppose about the 20th of August) we have *almost no surplus honey at all*. The season is the *poorest on record* with us."

Now after this account of the season, how can he say the foundation was the cause of his failure? He might just as well say his box-stuff was the cause, if that had been a little too thick! Do bees work in boxes

when they are "few and far between?" Do bees work in boxes when it rains "day after day" for about a month? Do bees ever work in boxes in the "poorest season on record?"

Now if Mr. Burch does not return the \$50 to Novice, I would humbly suggest that he add a new chapter to "Money in the Apiary," headed, "How to make Money without Bees or Honey." Novice asks, what shall I do? For one I would say, pay no more such bills, but lay the case before a few honest and intelligent bee-keepers, and abide their decision. JUSTITIA.

For the American Bee Journal.

Bees of the Same Swarm Fighting.

In the "Notes and Queries" department for February, R. C. Cameron tells of bees killing each other after a queen had been liberated among them, and that he was sure that no strange bees had entered the hive. And Ch. Dadant says that he never knew bees of the same colony to fight each other.

I am satisfied that bees sometimes will fight among themselves, when a strange queen is among them. One year ago last summer, when honey was plenty, and bees were not robbing, I was destroying a lot of hatching queen cells in one of my hives. I opened one having in it a mature queen. This queen, just out of the cell, I put down at the entrance of a neighboring hive, and she went in. In a few minutes bees began to come out, that had evidently been stung. This continued until several hundred had been killed, when the young queen which had been the cause, as I then believed and do still, of the trouble, was dragged out dead. There were no robbers about the entrance of the hive. As soon as the young queen was disposed of, peace ensued.

I have been in the habit of keeping queens for a few days, by putting them, caged, into hives having laying queens, and generally no trouble has resulted. Sometimes I lay the cage over a hole in the honey-board, and the bees will feed the imprisoned queen for weeks, if forage is tolerably plenty. Last summer I laid a caged queen over a hole in the honey-board of one of my hives, and in a short time the ground in front of the hive was covered with dead and dying bees. I had not opened the hive, and there were no robbers at the entrance. I then opened the hive and found the bottom board covered with bees clinched in deadly combat. I removed the strange queen, and in a short time all became quiet again. I am very sure that the bees engaged in this combat all belonged to the same colony, and the more so because honey was so plenty that bees did not care to rob.

Late in the summer, I opened a nucleus hive and found a knot of bees on the bottom, enclosing a dead queen which had entered from another nucleus. This hive contained several hundred dead bees which had evidently been stung; but whether they had been killed by the bees of their own colony or whether they were intruders, I had no means of ascertaining. I know that a young queen will sometimes kill workers, and do it very quickly. I have seen them do it several times.

M. MAHIN.

New Castle, Ind., Feb. 6, 1877.

Our Letter Box.

Dundee, Ill., Feb. 6, 1877.—“Our bees are doing splendidly.” J. OATMAN & CO.

Dakota Co., Minn., Jan. 29, 1877.—“I have 40 swarms in the cellar, doing well. Last season was a poor one, but my black bees stored the most honey in boxes and hives. No pure Italians did as well; though some hybrids did. Italians will keep themselves clear of worms, etc., better than blacks.”

L. E. DAY.

Saginaw Co., Mich., Feb. 2, 1877.—“Last spring I had but 2 stands of bees left out of 42 in the fall. These I increased to 34, and took 20 on shares; so am now wintering 54. I have Italians and use the Quinby hive; I have a saw mill for making hives.”

DR. C. M. JOSLIN.

Lancaster Co., Pa., Jan. 27, 1877.—“Bees did but little last season in storing honey. It rained all the time during fruit bloom, and white clover failed. This is a hard winter on bees, and losses will be heavy.”

J. F. HERSHEY.

Waukesha Co., Wis., Jan. 27, 1877.—“My bees in the cellar appear to be doing first-rate; I have 26 colonies in a bee house I had made *a la mode* Coe. They winter well but loose their queens. I like them better outside, in the summer; they are easier to handle, and there is no loss of queens.”

H. S. HARRISON.

Chickasaw Co., Iowa, Feb. 6, 1877.—“My bees are wintering well, so far. I have them on their summer stands, packed in chaff, and so arranged that I can fly them under glass on any sunny day, with the thermometer up to or above freezing point. The plan worked well with me, last winter, and seems to be doing so this winter. Please keep us posted through the JOURNAL as to how bees are wintering through the country at country at large.”

O. O. POPPLETON.

Livingston Co., Mo., Feb. 2, 1877.—“We have had a thaw-out, and are in a delightful warm spell. I have just cleaned out the bees and find them in better condition than usual at this time of the year. They have worked lightly on their stores of sealed honey. I have lost but one colony in 35. I left them on their summer stands. I believe that is the best place to winter them. The requisites are: plenty of honey, strong colonies with a fair quantity of late bees, a hole through the very comb, and no upward and but very little lower ventilation. I use no quilts or cobs or straw, this time—only a honey board, $\frac{3}{8}$ in. thick.”

J. W. GREENE

Scott Co., Iowa, Feb. 1, 1877.—“The past season was a splendid one, in this section, for bees and honey. I had 30 stands in the spring of 1876, increased to 50 (eight first swarms left for the woods; they would come out and go off without stopping to cluster). I received 2,000 lbs. of honey—600 lbs. of comb and 1,400 lbs. of extracted. From Nov. 15th to Jan. 25th, the bees were confined to their hives on account of a con-

tinual frost, but the last four days of Jan. has been warm, and gave the bees a chance to fly. I am wintering on summer stands; all have chaff boxes over the bees; part of my hives are packed with about a foot of straw between them, also between them and the fence, but they contained more frost than those in the open yard. I have used one of Finn's double-walled bee-hives for the past two years, with the best success. To-day it is stronger than any of my other swarms. The past summer I obtained two swarms and 125 lbs. honey—95 lbs. comb and 30 lbs. extracted. I have been slow to adopt this hive as a standard, but after two years of experience, I have come to the conclusion that it is the hive for outdoor wintering; let others think and do as they wish, but I want a hive that gives good returns in summer and always ready for sudden changes of weather and winter.”

GEO. L. GAST.

Erie Co., O., Dec. 13, 1876.—“My-hives are made as follows: A long box with 20 reversible frames. I can take the frames out, set the hive on end, and put the frames in two sections of ten each, one above the other, making a double decker; or by removing the upper set, boxes or small frames for comb-honey can be put in. The long principle is for breeding in spring, and the reversed form for honey and wintering. An Italian swarm will fill the hive with bees, and then by reversing, they may be crowded into the upper apartment. Please give us your opinion of our arrangement.”

GEO. H. MACKEY.

[Opinions differ as to the value of your plan of changing. Just now we think those who use extractors favor the two-story arrangement.—ED.]

Nashville, Tenn., February 5, 1877.—“The Binder you sent me has come to hand, and I like it so well that I send for another, as I wish to preserve my BEE JOURNALS in a convenient form for reference.”

MRS. A. E. O'NEILL.

[This is the universal verdict of those who have Binders for their BEE JOURNALS. We now get them up so that they will just hold one volume of the BEE JOURNAL, and as each number can be inserted as soon as it is received, it is thus preserved, and is in the most convenient form for reference at any moment.—ED.]

De Witt Co., Ill., Feb. 1, 1877.—“In the fall of 1875, I made a box 14 ft. long, 2 ft. high and 20 in. wide. I then made a frame for every hive, 4 in. deep and 14 in. wide, by 20 in. long. In the front end there was a door slide with a screen in it, $\frac{3}{4}$ x 5 in.; then a strip 4x14 in. was laid on loosely, to be taken off at will. Then another strip, 4x14 in., nailed down stationary, so as to leave a space 12x14 in.—the size of my hive. On this I placed my hives, leaving a space of 4 inches below the comb for an air chamber, and the screen in the slide pieces as a ventilation for the bees. I then filled the 3 in. space around the hives with sawdust, covering up the top of the hives. They wintered well. Last fall I made the box so that it would take in a double row of hives, on the

same plan, and filled in the open space around the hives with thrashed oats, as I had done with the sawdust; only I filled in under the hive, 2 in. deep, with oats to absorb the moisture. The box I put on posts about 3 ft. high, to protect against mice. In this way I can keep out the mice, equalize the temperature, and only let them go out when there is a surety of their returning. Thousands of good hives are lost during winter by letting them go out at will, when they should have been kept in-doors, for safety."

J. M. PORTER.

Audrain Co., Mo., Feb. 3, 1877.—"So far most of our bees are standing the extreme cold winter as good as I could expect, though some colonies have lost many bees, and I fear will come out weak in the spring. My 3 old stands, packed in hay, are doing finely, with scarcely a dead bee. I bought 10 hives in Dec.; they are on their summer stands; some of them have lost heavily, but I think I will get them through."

P. P. COLLIER.

Waukesha Co., Wis., Feb. 5, 1877.—"I keep about 10 stocks outside, in double hives, made of 1 inch stuff, with 1 inch space filled with sawdust; they do better than those in the house or cellar, besides the advantage of giving them a fly when warm enough. I take off the cap, honey-board and quilt, and let the sun shine on them, which they seem to enjoy. It gives them a good chance to fly and void their excrement. After that they seem quiet, even if it should come off warm. Mine are all doing well."

H. S. HARRISON.

Lansing, Mich., Jan. 20, 1877.—"Mr. L. C. Root has sent me one of the improved Quinby smokers. As I stated that this was a patented article in the 'Manual of the Apiary,' I wish to make the correction. I believe Mr. Quinby generously gave all his inventions to the apianian public. This smoker I have used for two years. I paid \$1.50 for it, and would have been pleased at double the cost. I consider it a very valuable aid in the apiary. After two years, the leather burst, but this was mended at an expense of 25 cents and one hour's time. Mr. Bingham, of this State, has for sale two forms, essentially the same, though perhaps a little stronger in material and draft, yet costing 50 cents more. I believe Mr. Root has achieved what he aimed at—to make the smoker so cheap and well, as to forestall competition."

A. J. COOK.

Los Angeles Co., Cal., Jan. 11, 1877.—"So far, we have had no rain in this section of California. If it does not come soon our honey crop, as well as our purses, will be light. We have had delightful weather all the winter—sunshine all the time. Some of my hives have now 3 frames of capped brood, and larvae in different stages. I got an imported Italian queen from Mr. Dadant, last fall, and I expect to Italianize my whole apiary, which consists of 100 colonies of blacks. Last spring I had 45 and increased to 100, besides getting 10,000 lbs. of extracted honey. I use the Langstroth hive, lengthened to take 17 frames. They are all painted white, except the fronts which are of different colors. They are in rows 6 feet apart each way."

J. E. PLEASANTS.

Marshall Co., Ill., Feb. 9, 1877.—"My bees look well. I have 7 kinds of hives. Finn's porous double-walled bee-hive winters the best on summer stands. I have had 12 of them in use for two winters. On Feb. 1st, I noticed some Italian bees in front of a Finn hive; on the 7th I opened one of them and found brood and plenty of honey. All my bees are in fair condition, but those in the Finn hives are the best. I purchased \$7.50 worth of comb foundation from Mr. Perrine; the last lot being too thin, it broke too easily for surplus boxes. I like it well; for heavy swarms I take a strip of comb, 1 inch wide, and fasten to 3 or 4 frames, to secure straight comb building. My yellow bands can keep up with any black bees on their summer stands. The BEE JOURNAL is a welcome visitor."

C. M. HALBLEB.

South Pendleton, O., Jan. 7, 1877.—"By the January number of the A. B. J., I learn Mr. W. J. Andrews is the president of the N. B. K. Association, and I judge from his remarks that he intends to try and stir bee-keepers up to the importance of having a National Society that will make itself felt at home and abroad. It is a great pity that at the Centennial a better opportunity was not afforded of letting the world see our success and improvements in apiculture. His suggestion to have some beneficiary idea in connection with the Society, strikes me as something that would hold the Society together, and meets my hearty approval, and I shall use my influence to organize a society here."

WM. STUMP.

Montclair, N. J., Jan. 17, 1877.—"I was deeply interested in the address of our worthy president, in the January number of the JOURNAL, regarding our National Society; and trust that every bee-keeper in the land will give good heed to his stirring appeal. A few months ago the early dissolution of the Society seemed imminent; but the increasing interest in the subject leads us to hope that such a calamity will be averted, and that within the present year we shall see it established on a broad and permanent foundation. Very much depends upon the success of the next meeting. If it is composed of a large delegation of earnest, wide-awake bee-keepers from all parts of the country, success will be almost certain. I would suggest that an effort be made to have a large display of apianian supplies and products. As 'Committee of Arrangements,' I will see that ample space is provided for the proper display of all articles that may be sent. May we not hope that each State will be represented by a large and well-filled space; and each strive to be the 'Banner State.' It is to be hoped that many suggestions bearing upon the subject will be made through the columns of the JOURNAL."

J. S. COE.

Wakefield, Quebec, Dec. 26, 1876.—"King birds are an enemy to bees in some places, but our bee enemies are fish. My bee garden is close to a mill pond; and the first 2 years I kept bees, it was impossible to get them strong enough to swarm during the whole summer. I saw them on the surface of the water and the fish enjoying their feast. Last year I removed them a considerable distance, and they did better, but it is inconvenient to have them so far from my house."

JOHN EDMONDS.

Appanoose Co., Iowa, Feb. 9, 1877.—“My bees have been flying now for several days, as the weather is quite warm. They have wintered this far without loss, and are in a very fine condition. I protect my bees, on their summer stands, with straw and chaff, leaving the entrance open, so they can fly when it is warm enough. I think this is a good way to winter bees. I have never yet lost any that were protected in this way. I have a few colonies in a good, dark cellar; they seem to be doing well. I began last spring with 10 colonies, increased to 25, got 600 lbs. of honey, and raised 80 queens. The season was very good for bees in this section until the 1st of Sept.; after that time very little honey was gathered. I wish the AMERICAN BEE JOURNAL much success.”

M. M. CALLEN.

Macomb Co., Mich., Jan. 9, 1877.—“I had 21 colonies in the spring. I increased them to 46, mostly by artificial swarming. I put in 8 foreign colonies in the latter part of the season, making 54; from which I have taken 2,000 lbs. surplus honey, all extracted, and nearly all fall honey. Having only about 375 lbs. white clover and basswood. The season has not been very good; too much rain and cold, and windy after rain. Basswood blossom was blasted, yielding honey only about 5 days, while last season it produced honey nearly the whole of July. Fall blossoms produced bountifully. Buckwheat is our main dependence for fall production. Fortunately for my bees, our farmers are buckwheat raisers. I winter in the cellar, which is built of brick, with hollow walls and siding outside of brick; a chimney runs down into the cellar, by which I ventilate. Last year I wintered in this cellar without loss, and had very few dead bees in the hives. I could not see that they had consumed any honey. I raised one end of cover of 3 hives, placed $\frac{1}{4}$ inch block under, giving top ventilation. I think it was a success. They came out strong, and with bright comb; although I had very little mouldy comb, the cellar being very dry. I have so arranged the entire lot this winter. I can easily sell honey; making sales is the least of my anxiety in the business. I have for 9 years been engaged in the mercantile business, selling all kinds of goods, and honey sells as easily as any goods that I ever offered to the public. I believe in encouraging new beginners in the business. I do not think that the product will ever excel the demand, and if I cannot keep pace with others in the business, I am willing to come in behind and do as well as I can, and if it will not pay me I will quit. It pays if attended to, and some years pays largely.”

W. P. EVRITT.

Schoharie Co., N. Y., Jan. 8th, 1877.—“I commenced last spring with 64 stocks, some of them weak; wintered out-of-doors, increased to 84 by artificial swarming, got 3300 lbs. of box honey in 2-lb boxes, and 1200 lbs. of extracted. I built a bee-house last fall, 12x18 ft.; dug in the side hill, planked up next the ground with dirt a foot thick on top, with roof over the dirt. I have now 113 stocks in it, and one out-of-doors. I think it too cross to die. The thermometer inside keeps at about 40 deg. Yesterday I went into it; the bees were quiet, and it was dry inside. A ventilator, 6 in. square, I keep open nearly all the time. I put in 90 stocks

on Nov. 29. I bought 24 more and put them in on Dec. 28. There was some frost in the latter, but I think they are all right. A year ago last fall I bought some queens of H. Alley; I lost all but two, one of them I breed from, and if I could not get another like her, I would not take \$25 for it. I never saw bees more gentle. I commenced keeping bees nearly 10 years ago, and I have never failed in getting some surplus. Near where I live there are 150 acres of land that was formerly covered with water. Where I used to catch fish I now get the most of my honey from. It produces a species of golden-rod. The honey from it is much better than basswood in flavor and lighter colored than buckwheat. It is a beautiful wine color and very thick, so that I could hardly extract it. It was so dry here, that buckwheat was a failure.”

B. FRANKLIN.

Jefferson Co., Ky., Jan. 1, 1877.—“Bees have only done tolerably well this season. Most of my hives were very weak in the spring, and the weather was cold so late that I got only 20 of my best built up tolerably well, 10 remaining weak; making in all 30 hives. I got 150 lbs. of box honey and 3,500 lbs. of extracted from 20 colonies. The weaker hives I used for building combs, etc. My honey was excellent and I had no trouble in disposing of it. My father and myself have sold, in our own market, 4,500 lbs. of honey, averaging 20 cts. per lb. We marketed it in 30 and 40-lb cans and 1 and 2-lb honey jars; selling it to grocerymen, druggists, etc. When we found persons that doubted its purity, we left them what they wanted, without pay, until we came in again, when they invariably paid for it and took more. In this way we built up a good home trade, and could now sell double the amount of honey if we had it. I do not see why others could do the same; build up a home demand and get better prices for their honey. It will pay any one that is making a business of bee-keeping to go to the trouble of building up a home trade. I increased by bees from 30 to 42 colonies. I have doubled my weak hives and fixed them up for winter, on their summer stands. I put four $\frac{1}{2}$ -in. sticks across the frames, then a piece of bagging or coffee sack the size of the top of the hive over the sticks, then a box 6 in. deep, the same size, with a good quilt, made of heavy brown cotton and one sheet of wadding, tacked to the bottom of the box. I filled this box with chaff or fine, dry grass, packing it in tight, put it on top of the bagging, pressed it down on the frames; put on the top or upper story; contract the entrance so that two bees may pass, and saw that they had plenty of honey for winter.”

WM. BENCE.

Polk Co., Iowa, Feb. 10, 1877.—“I put in to the cellar 56 colonies the latter part of Nov. I carried them out last week, and let them have a fly, and returned them to the cellar. They were all in good condition. I have no hesitancy in insuring 95 per cent. of any apiary that was well handled last season, if wintered in a good cellar.”

H. G. HENDRYX.

When you have a leisure hour or evening, why not drop in on a neighboring family and see if you cannot get a subscriber for THE AMERICAN BEE JOURNAL?

The North-Eastern B. K. Association.

The Seventh Annual Convention of the North-Eastern Bee-Keepers' Association was held at Syracuse, N. Y., on Feb. 7-9, 1877. Mr. R. Bacon, President, in the chair.

Mr. J. H. Nellis, of Canajoharie, Secretary, read the minutes of the proceedings of last year's convention, which were approved.

Among those present were: Messrs. P. H. Ellwood, Starkville; G. M. Doolittle, Borodino; N. N. Betsinger, Marcellus Falls; F. H. Gates, Chittenango; M. B. Warner, Syracuse; J. H. Dudliston, Chittenango; C. D. Jones, Kerkwood; E. D. Clarke, Randallville; E. F. Wright, Lakeport; J. H. Nellis, Canajoharie, Sec'y, and R. Bacon, Pres.

The committee appointed at Rome last winter to arrange for the representation of apicultural products at the Centennial, reported. Prizes were offered for the best essay, and for best display of honey. The Sec. reported that the Centennial Commission had announced no awards yet, but it is believed that Capt. J. E. Hetherington was entitled to the premium for the best display of honey, and the proper committee had awarded Prof. Cook the premium for the best essay. The report was adopted.

President Bacon then delivered his opening address, in which he dwelt on many important items. [This we will publish in our next issue with other essays.—Ed. A. B. J.]

The constitution was amended so as to make the admission fee 50c instead of \$1.

Reception of members followed and 26 names were added to the roll.

The election of officers was then proceeded with, and the result was as follows: president, P. H. Ellwood, Starkville; vice-president, G. M. Doolittle, Borodino; secretary, J. H. Nellis, Canajoharie; treasurer, Reuben Bacon, Verona; honorary vice-presidents, E. D. Clarke, C. D. Jones, Dr. A. H. Marks, and N. N. Betsinger.

A committee of four on order of business was appointed, as follows:—C. D. Jones, N. N. Betsinger, M. B. Warren, G. M. Doolittle.

A motion made by the Sec'y that no member be allowed to speak more than twice, and not longer than 5 minutes at a time; carried.

A proposition to appoint delegates to the convention of the National Association was laid on the table for the time being.

The following questions were submitted:

Will the introduction of a young queen into a stock before they get the swarming fever prevent swarming?

Mr. Betsinger—had tried the experiment, and the bees swarmed.

Mr. Doolittle—This is true of Italian bees, but not generally of black bees.

Mr. Ellwood—The introduction of a young, fertile queen will retard swarming, but will not always prevent it.

Mr. Doolittle—Everything swarmed with me the past season, in spite of all I could do.

Mr. Nellis—Had little experience, but was of the opinion that the introduction of a young queen would have little effect at prevention.

Mr. Betsinger—Did not think the condition of a queen made any difference as to the result. She may be fertile or a virgin.

With box-honey at 20 cts. per lb., what can extracted be sold at to yield same profit?

Mr. Ellwood—About 15 cts.

M. B. Warner—Was able to get as much for extracted as for box honey, and got twice as much extracted.

Mr. Nellis—Extracted at 10c is as profitable as box at 20c. It is more difficult to market extracted, but at 10c—the price of syrup—it ought to sell readily.

Mr. Doolittle—Due allowance is not made for extra work in extracting honey.

Mr. Nellis—A reduction in price would encourage consumption. Would accept 20c for box and 10c. for extracted, if the latter were taken off his hands without extra trouble.

Mr. Betsinger—Would change my hives and produce only extracted, if sure of 10c. for it.

Mr. Ellwood sold extracted as readily as box.

At what age do bees begin labor in fields?

Mr. Ellwood—It is stated in bee books that they begin at 2 weeks. I think much earlier.

Mr. Betsinger—They begin to labor as young as 6 days, if compelled to.

Mr. Doolittle tried many experiments, but could not, by any natural process, get bees into the field younger than 16 days. They are nurse bees or comb builders up to that time, they can be forced into the field at 6 days, but will return with light burdens.

It was voted to have an informal meeting in the evening, beginning at 7 o'clock, and that the daily sessions begin at 9 a.m.

The evening session consisted of an informal conversation which may be summed thus:

If wintering bees in a house or cellar, do not disturb them during winter. The cold frame has been found unsuccessful; bees are wont to enjoy their freedom. To prevent bees from swarming, make an artificial swarm, and use the extractor. More than one swarm will usually prevent the production of a good crop of honey. By cutting out every cell and putting back the second swarm it generally remains. A safe device to prevent a second swarm is, after 4 or 5 days, to cut out all the queen cells, wait 4 or 5 days more, and again cut out all cells; have extra queens ready, and upon introduction they will be accepted in the original hive. They will rarely swarm when no honey is in the hive. Some have prevented swarming by changing the location of hives just before the climax. A stream of water played upon a swarm will always hold them when in the air. When honey is moderately gathered and weather hot, it is almost impossible to prevent swarming, owing to the vast amount of brood produced. When bees are gathering honey abundantly they are crowded, and there is a tendency to swarm. These principles are true of Italian bees. The disagreement of doctors, was quite marked during the discussion, which ended at 9 o'clock.

SECOND DAY'S PROCEEDINGS.

The treasurer reported a balance in the treasury of \$36.71.

Blanks for statistical reports of bee production were distributed. Ex-president Bacon urged attention to this matter.

A communication from L. C. Root stated that illness prevented his attendance. He criticized a communication in THE AMERICAN BEE JOURNAL, from T. F. Bingham, declaring that nothing had been published in the journals that contained any information on bee-culture not found in the books. Mr. Root pronounced this untrue, and his sentiments were endorsed by the convention.

The question of sending delegates to the National Convention to meet in New York next October, was discussed, and it was moved that 6 delegates be sent. The motion was carried. The delegates appointed consisted of Messrs. Nellis, Bacon, Jones, Doolittle, Betsinger and Warner.

Mr. Nellis moved that the committee be empowered to use the influence and funds of this Association for the promotion of the interests of the National, and of this, at the discretion of said committee. Carried.

A communication from James Heddon was read. He said that repositories for bees should have solid walls and be extremely thick. He used a cellar under a building set close to the ground, well ventilated. He is not in favor of a winter flight, believing it hastens destruction. He rather discouraged organization, because bee-keepers are so scattered. California is at present flooding the Chicago and other markets, but prices will in time come down so low as to make it unprofitable for that State to send honey East.

Mr. Bacon—I favor organization, to prevent persons ignorant of the market from ruining it at improper seasons by selling too low.

Mr. Nellis—We must produce honey cheap enough to compete with other sweets, to

make it a commodity of general demand and ready sale. Can bee-keepers do this? If so, there is no limit to the business of honey-producing. If not, the business is already overdone.

The best way to introduce queens.

Mr. Nellis—recommended removing the queen and all queen cells at 7 days, dislodging the bees from brood comb, for the latter purpose. He rolls the queen in honey and drops her into the hive. By this method he does not lose more than one queen in 200, and in case of loss, it can be traced to some carelessness. Does not favor caging queens. When it is done, she will be likely to starve, unless she has access to food independent of the bees.

Mr. Doolittle—There is great loss in a hive being 7 days without a laying queen. I make a square wire-cloth cage, open on one side. The open side he raves out, and after putting in the queen, he presses it into the honey at the side of a comb. With a small knife makes a hole through the comb, which admits only 1 bee at a time. The queen soon acquires the scent of the bees, and generally 3 hours is all the time required to introduce a queen.

Mr. Nellis—Seven days' time secures more empty space for the queen to lay in, and calls out her full capacity. Without this space she is only partially employed. Hence there is not so much loss by this method.

Mr. Betsinger—It is a great loss and brings the brood too late to be of much value to the apiarist. I favor the immediate introduction of the queen by Mr. Doolittle's method.

Mr. Gates—I favor the smearing of the queen with honey from the hive, and her immediate introduction. By the time the bees have cleaned her she has acquired the proper scent and is recognized by the bees.

Others favored this method. Mr. Clarke had had failures by it only in August.

Mr. House—August is a bad season for introducing queens.

How do bees reduce their honey to the nice article after it is capped over?

Mr. Doolittle—All know that honey is usually in this thin condition when first deposited. The bee that brings it in does not deposit it. It is given to the young bees. At night all the bees take this honey into their honey sacks and eject it out, and draw it in through the proboscis, until the honey is reduced to the proper consistency. This process causes the well known roaring in the hive, which is heard at night in the honey season.

Mr. Betsinger—The amount of honey gathered in the flush of the season is too great for the bee to dispose of in this way.

Mr. Doolittle—All that is not disposed of daily in this manner is left deposited in cells until time is found for its reduction. After 2 or 3 rainy days the cells are all capped over.

Mr. Nellis—All manipulations and changing from cell to cell is for the purpose of evaporation. The temperature of the hive favors it.

Mr. Betsinger—The young bee's business is to make wax, and this passage of honey back and forth through the proboscis is for this purpose.

Have blacks qualities superior to Italians?

C. D. Jones—I always found Italians the best honey gatherers.

Mr. Warner—I had the same experience.

Mr. Nellis—Black bees work better in buckwheat and build thicker comb. These are the only two points of superiority I observed. I think black bees cap thicker and farther from the honey, thus giving it a white appearance.

Mr. Perry—I know of no point in which the Italian is superior to the black.

Mr. Bacon—My experience shows the black bee to be harder, and to run out the Italians.

Mr. Doolittle—The running out of the Italian is simply because the blacks in the country so much predominate in numbers.

Mr. Jones—I see no superiority in the black, even in getting buckwheat honey.

Mr. Betsinger—The black bee is superior, it does not swarm so much as the Italian.

Mr. House—I like a grade of about $\frac{3}{8}$ Italian and $\frac{1}{8}$ black.

Does a swarm ever issue without a queen?

Mr. Phillips—Had no experience of this kind.

Mr. House—I never knew a swarm to issue without a queen.

Mr. Betsinger—Had bees swarm without a queen. Tried to prevent swarming by destroying the queens, but they swarmed just the same.

Mr. Bacon—Had similar experience; keeps black bees.

Mr. Nellis—By breeding from stocks least disposed to swarm, the tendency to swarm can be greatly reduced.

Mr. Betsinger—I once thought so, but the last season had dispelled that idea.

Mr. Doolittle—Last season I had no swarming without a queen, unless there was already in the air a swarm having a queen.

Mr. Betsinger—I had a swarm go off without a queen but returned, I think, for that reason. Adjourned to 1:30 p. m.

A paper by Dr. J. P. H. Brown, of Georgia, on "The Purity of the Italian Bee," read and ordered printed with the minutes.

Is comb foundation advantageous?

Mr. Ellwood—Had not much experience. As far as he had, he failed, but his foundation was not perfect. Think that bees do not make comb of wax but of a material that is changed into wax when they build comb. They can use wax in limited quantity, but not to advantage for the entire building of combs.

Mr. Nellis—I have tried it. Weak stocks do not build on it in time of scarcity. Strong stocks begin to lengthen out the cells. They first thin the bottom of the cells of the foundation. Queens avoid it. Size of the cells may have had something to do with this. It was readily used for storing honey. The cells were a medium between drone and worker cells. The weather was cold when I tried the first experiment. In warm weather I met with the best success.

Mr. Betsinger was unsuccessful with it.

Mr. Bacon called for the reading of a communication from J. P. Moore, which appeared in the AMERICAN BEE JOURNAL. Mr. Moore said that foundation was a failure, and that it would be better, if we had a supply, to melt it up and sell the wax. Artificial foundation is not worth over 10c. per lb., if natural costs 50c.

Mr. Gates—I cannot get my bees to accept it.

Mr. Bacon—Melted comb is not comb but wax, and more indigestible when melted and manufactured into artificial foundation.

Dr. Marks concurred in this opinion.

Mr. Moore endorsed both. He considered comb more digestible than wax.

Mr. Wright—Bees slight artificial starters while they build on natural. In some cases they tear the artificial down.

The President—The fact that some artificial foundation is composed largely of paraffine might account for its rejection by the bees; they might accept it if made of pure wax.

Mr. Nellis—I would not use it for box-honey. It is good for extracted honey, and is advantageous in discouraging brood rearing. If used for box honey, it must be made of pure wax, equal to natural comb, or it will injure the sale of box honey.

Mr. Doolittle—I have tried to make artificial foundation a success. It sagged badly. Natural comb would be accepted and filled and finished while the artificial remained untouched. This was made of paraffine. I tried wax artificial foundation. The bees accepted it but did not fill out the comb perfectly. A few boxes were filled. It cut badly with a knife, and ate worse. Once in the mouth, the foundation had to be gotten rid of, it could not be swallowed.

Mr. Bundy advocated its use in the brood chamber to avoid drone comb. To get all worker comb built is sometimes difficult.

Mr. Doolittle had some which sagged and leaked in hot weather, to the bees' confusion. Mr. Ellwood had seen the same thing. Moved and seconded, that artificial comb foundation is a success. Lost, emphatically.

How many pounds of honey are consumed in producing one pound of comb?

Mr. Doolittle—Up to last year, I concurred with Huber and Quinby, that it takes 20 lbs. of honey to make 1 lb. of comb. Tests have been made under unnatural circumstances. My observations lead me to believe that it does not take over 10 lbs. of honey for 1 lb. of comb. I believe pollen is sometimes largely used in comb manufacture by the bees.

Mr. Ellwood—Huber's and Quinby's estimates are too high. My opinion is that, in the favorable part of the season, 10 lbs. of honey is enough to make 1 lb. of comb. It has been demonstrated that 1 lb. of comb can be made from 13 lbs. of honey. It has been asserted that bees will make more comb from sugar syrup than from honey. I think this true.

Mr. Betsinger—20 lbs. of honey to each lb. of comb is not too high an estimate. My opinion is that it takes an equivalent in work of 30 lbs. of honey to make 1 lb. of comb.

Mr. Clarke—I made 50 lbs. of sugar into syrup, and fed it to 5 stocks of bees. From it I got 20 Langstroth frames of comb, to 5 lbs. of comb, which would be 1 lb. of comb to 5 lbs. of sugar. A quart of water was added to each pound of sugar. Thirty pounds of syrup were deposited in this comb. The work was accomplished in less than 3 weeks. They were not confined and may have gathered some honey.

Mr. Bacon gives late swarms comb, and they put in honey enough to live on through the winter. Without this aid, they are a failure.

Mr. Ellwood—In making estimates, allowance enough is not made for the extra time required to build comb, and hence a larger amount of honey is claimed to be necessary for 1 lb. of comb.

Mr. Doolittle—Most comb building is done in the night. Others concurred in this.

How much entrance should there be in a 3 lb. honey box?

Mr. Jones—Two $\frac{3}{4}$ in. slots, about 4 in. long.

Mr. Doolittle—It should be twice that size.

Mr. Bacon—Many failed by not giving sufficient entrance for the bees.

Mr. Jones—The entrance should not be large enough to entice the queen.

Mr. Betsinger—I open $\frac{1}{2}$ in. the entire length.

Mr. Doolittle concurred in this.

Mr. House—The larger the entrance, the better. A bottom perforated with holes, each large enough to admit a bee, was not as well as the same all in one hole.

How large should starters be in boxes?

Several said, "the larger the better."

Mr. Betsinger—I never use a starter more than 2 in. square.

Mr. Bacon—It is difficult to get starters pure enough not to show in contrast to new comb.

Mr. Doolittle—I use a triangular starter, about $1\frac{1}{2}$ in. each side; bees accept it readily.

Why will bees fill more boxes on low hives than on tall ones?

Mr. Ellwood—Because the boxes are nearer the brood, though the honey may not be as good quality.

Mr. Longstreet—I never saw brood near the top of a tall hive.

Will bees winter better in a tall hive?

Mr. Jones—Not in all cases. I get more honey from the low Langstroth hive.

Mr. Nellis—For out-door wintering the tall hive is the best, because the honey is above the bees and kept warm and accessible, but frost effects the honey at the side. In a cellar, where the temperature is uniform, the form of hive has not much to do with wintering.

Mr. Bacon agreed with Mr. Nellis.

Mr. Perry—Tall hives are best, because the live bees can get farther away from the dead.

How to secure all straight worker comb?

Mr. Doolittle—Use a wax guide by means of a straight edge, and hive the bees on frames with such guides.

Mr. House—I space off equally, $1\frac{1}{2}$ in., and use a triangular piece below.

Mr. Betsinger—I favor frequent examination and straighten the comb if it is going wrong.

Mr. Nellis—If started right there is no inclination to vary from a parallel until the combs are two-third built. I incline the hive at an angle of 45° , and turn every other frame round end for end, as soon as the edges of the comb will lap by each other. This makes crooking impossible.

Mr. Bundy—I use comb foundation.

Is the honey extractor a success?

Mr. Nellis—Yes, if extracted honey will bring half the price of box honey, and find quick sale.

Mr. Betsinger—I concur in that.

Mr. Ellwood—I find the extractor a success. Others favored the use of the extractor in many ways.

Will bees winter as well when run for extracted as when for comb honey?

Mr. Ellwood—They winter better when run for extracted honey.

Mr. Betsinger took the opposite view and contented that a swarm may be too large, and become uneasy because of too much heat at the centre. It was suggested that more ventilation would remedy this difficulty.

What to do with hives that are now half buried in snow?

Mr. Ellwood—Let them alone.

Mr. Nellis—Shovel them out.

Several members related instances of bees 5 or 6 ft. under the snow that wintered well. This suggested—"Finish the burial."

By request, Mr. Bacon presented a detailed description of his bee house.

A ballot for the next place of meeting resulted—Syracuse, 20; Rome, 5; Binghamton, 2; Oneida, 1. Syracuse declared chosen.

N. N. Betsinger and M. B. Warner were appointed a committee to secure a hall.

The convention had the honor of the presence of Miss Lottie A. Wilkins (Nellie Linswik) and two other ladies.

CLOSING SESSION.

The convention was called to order by the President at 9:30 a. m., Friday.

Mr. Doolittle exhibited a 6-lb. box sawed into 3 sections, which can readily be separated, when filled, and sold in separate frames of about 2 lbs. each.

A letter from C. R. Isham, of Peoria, N. Y., was read, suggesting that the attention of the State Agricultural Society be called to the business of bee-keeping, and that it encourage exhibitions of honey at the State fairs.

Rev. E. Van Slyke, of Syracuse, one of the first members of the Association, was introduced, and proceeded to make a few remarks. He is a friend of bee-keeping because it makes man studious and industrious. It compels him to prompt judgment and action. If success is achieved, the bees must be kept and not left to keep themselves. He thinks there is still a chance for the improvement of hives, but all efforts should be made with an eye single to the public welfare, and not in a selfish, money-making spirit.

Mr. Van Slyke had read with interest the theory of Mr. Doolittle, as to the manner of evaporating honey. Does this Convention endorse that theory?

Mr. Ellwood was of the opinion that Mr. Doolittle's explanation of the mode by which bees thicken honey is not substantiated. The theory was originated by Mr. Gallop. The majority believe heat to be the principal agent. Certain entomologists claim that the tongue of the bee is not hollow. If that be true, the peculiar action described by Mr. Doolittle cannot take place.

Mr. Nellis—But few members had made sufficient observation to enable them to express a positive opinion.

Which is the best way to winter bees?

Mr. Bacon prefers an out-building above ground, made frost-proof, well ventilated and so arranged that temperature can be controlled. He would not have a floor to a bee-house, as it causes too much jar in walking over it. He would disturb bees as little as possible, and visit them only at night, and then with a bull's-eye lantern. He tests the temperature through an opening from above. Puts a layer of 5 or 6 in. of cut straw above each hive. Is strongly in favor of a winter flight.

Mr. Honse concurred with Mr. Bacon, but prefers a cellar, well ventilated. Did not succeed with straw, possibly because his bee-house is partly under ground.

Mr. Bacon—No board should be placed on the straw, it prevents evaporation.

Mr. House—Bees must be kept dry, and ventilation must be sufficient to secure this, but there must not be too much; 43 to 45° is sufficient.

The reading of Prof. Cook's prize essay was called for.

Mr. Betsinger favors out-door wintering, if hives are covered with snow. Allows bees to fly if the temperature rises to 45°.

MISCELLANEOUS QUESTIONS AND ANSWERS.

"Is anything gained by contracting the distance of frames from centre to centre for spring management?" Mr. Betsinger—There is a slight gain, keeping the heat confined starts breeding more readily in small swarms. In large swarms nothing is gained.

"Suppose the hive is 12x16 in. inside; is it better to have the frames and combs run lengthwise or crosswise?" Mr. Clark—Frames should run lengthwise of the hives, involving less expense and fewer bees to protect the brood.

"How long after the queen leaves her cell does she take her bridal trip?" Mr. Nellis—From 4 to 10 days, varying with the season. If a queen does not lay in 2 weeks after hatching, she should be killed.

"May combs soiled by bees which have had dysentery, be used again?" Messrs. Marsh and Bacon—Combs so soiled are not rendered useless. Bees will renovate them. They may be cleaned with a brush and water. It is well to let them be rained upon.

"Will the drones from a queen that has not mated prove useful for fertility?" Mr. Ellwood—Good authorities say that they are as useful as any.

"What is the best means of keeping the moth out of surplus combs, from March to the middle of June?" Mr. Clarke—Keep them in the cellar, and if infested by moths, fumigate with sulphur.

"Will moths in the larval stage live after being exposed in a zero temperature?" Mr. Nellis—No.

Mr. Ellwood did not know at what temperature they were destroyed, but it must be lower than 32°.

Mr. Doolittle narrated an instance where combs had been exposed to 8° below zero. When taken into a warm room larvae that had been hatched in the fall showed signs of life, and were restored to activity.

"Can bees make anything that looks like a queen from drone eggs?" Messrs. Nellis and Betsinger—No.

The committee in charge of the question box—Messrs. Betsinger, Jones, Warner and Doolittle—reported as follows:

"Is there any such thing as lazy bees?" No.
"Is rye flour better than buckwheat to feed?" No.

"How long from the time the eggs are laid before the bee emerges from the cell in June and July?" 18 to 21 days.

"Does it pay to feed extracted honey for finishing partly filled boxes?" No.

"Do bees make or gather honey?" Gather.

"Best cure for bee-stings?" Unknown.

"Best protection for the hands against stings?" Rubber gloves.

"Best mode of feeding in winter?" Frames of sealed honey.

"How far will bees go to get basswood honey?" 7 miles.

"How many eggs does a queen lay in the course of the season?" 360,000.

"How many of the eggs laid by the queen mature into bees?" As a rule, all; if only one is laid in a cell.

"Where two or more swarms settle together, what is the best way to separate them?" Secure each queen and divide.

"Are bee conventions profitable, so far as dollars and cents are concerned?" Yes.

"Is sugar better to winter bees on than late gathered honey, if the sugar is fed at the same time the honey is gathered?" No.

"Would you advise bee-men to use veils and gloves for protection?" No.

"Does it pay to allow bees to store buckwheat honey in boxes or frames at the present prices, for market?" Yes and No.

"Does it pay to raise dollar queens, when honey is worth 20c per lb.?" Yes, if the entire crop is taken, and not, by one.

"How can the largest amount of surplus honey be secured?" By the best arrangement.

"Does it pay to extract honey that may be replaced with sugar, providing that we find a ready market for our honey at 12½c?" No.

"When old comb is used, how much can be used to advantage in a new swarm?" For extracted honey, fill the hive; for box-honey, 3 combs.

"Why do Italian swarms leave the parent hive without filling themselves with honey?" From impulse.

"Can a queen sting?" Yes.

"When is the best time to move stocks?" After flying the last time in fall.

"What is the best method of increasing stocks?" Artificial swarming.

"Is spring feeding advised to induce early breeding?" Yes and no.

"Would it not be advisable to cover the top of the frames in spring with quilts or something to retain all heat possible?" Yes.

Mr. Doolittle and others made some remarks concerning the distance bees will fly.

A vote of thanks was passed to the authors of papers read, to the ex-president for his address, to the proprietor of the Temperance Hotel, and to the reporters. The Convention adjourned.

J. H. NELLIS, Sec'y.

[The table accompanying this report will be published in our next issue. It came too late for this.—ED.]


For the American Bee Journal. Introducing Queens.

I want to add something to my last article on this subject.

Sometimes trifles that are overlooked are of the utmost importance to success, especially in bee-culture.

We have often noticed that, if we use very fine wire-cloth for queen cages, the queens are not fed by the bees, and queen cells are started. The queen is then too much separated from the bees that they cannot see, smell, or caress her; and it is probable that to such a cause Mr. Nellis owes his mishaps in caging queens. Having had several queens killed by using cages made of fine wire, we now invariably use coarse wire-cloth—8 meshes to the inch. With such the queen is among the bees; they can put their proboscis through the meshes to feed her; they know that they have a queen and do not raise queen cells.

CH. DADANT.

 We desire to caution our subscribers not to send money by mail; either procure a Money Order, Registered Letter, or Draft.